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ABSTRACT

This report compares several farm characteristics of the mid-1980s with those of a decade earlier to document the real amount of change in the farm sector. Farms are stratified into five groups based on their farm income: rural residence, small family, family, large family, and very large. Sources and levels of farm operator income and wealth are first considered. Land ownership and tenure patterns are examined. Some variables are studied that can be measured to indicate variations in farm organization: farming enterprises, technology, yields, and intensity of resource use. An examination follows of changes in the degree of concentration of production and land used for producing specific agricultural commodities. The analysis uses Gini index-Lorenz curves and distribution curves. Census of Agriculture data for 1974, 1978, and 1982 are used to trace change in several variables that are important measures of the structure of the farm sector. Structural change variables are examined in both nominal and real terms. A final section describes further the five sales classes. Regions are compared with the national average. The basic structural characteristics addressed are farm numbers and size, asset value, sales, tenure, organization, off-farm work, age, and expenses. Forty-nine tables supplement the text, and a short list of other agricultural reports is included. (YLB)

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Agricultural Economic Report Number 548

The U.S. Farm Sector in the Mid-1980's

Donn A. Reimund, Nora L. Brooks, and Paul D. Velde

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Abstract

The number of U.S. farms with sales above a quarter million dollars increased by nearly 1½ times over the last decade, but about half the gain was due to inflation. This report presents the dimensions of change in the farm sector for a number of variables (income, wealth, ownership, organization, and concentration of production) adjusted for inflation to document the actual change between 1974 and 1982. It also presents economic profiles of typical farms by region for major commodities.

Keywords: Farm size, distribution, type of farm, commodity concentration, Gini indexes, Lorenz distributions.

Preface

This report is the eighth annual report to the Congress on the status of the family farm. These reports are prepared and submitted to the Congress annually in accordance with Section 102 of the Food and Agriculture Act of 1977 and Section 1608 of the Agriculture and Food Act of 1981. The authors gratefully acknowledge the contribution of Lynn Tate for his work in compiling the data, estimating Gini Indexes, and plotting distribution curves for the section on commodity concentration. David Harrington developed the conceptual basis for the distribution curves.

The primary source of data for this report is the Census of Agriculture, using data from the 1974, 1978, and 1982 Summary and State volumes, and the 1979 Farm Finance Survey. Regional data for 1982 are sums of the States as regional figures were not published. Additional data on income, assets, and financial status were obtained from *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*. Data on the ownership of land are from a landownership survey conducted by USDA in 1978.

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Summary

The dimensions of change in the U.S. farm sector over the last decade tend to be exaggerated because they are generally reported without adjusting for inflation. When the changes are recalculated in constant dollars, a truer picture emerges showing substantially less actual change.

For example, the censuses of agriculture document that the number of farms with sales above $250,000 grew by 143 percent between 1974 and 1982 in current dollars. Yet, more than half of that increase was due solely to inflationary increases in commodity prices.

Likewise, the number of farms with sales of less than $10,000 declined by 9 percent in current dollars, but just 1.5 percent in constant dollars.

Similar calculations also show little change in the level of concentration of production and acres harvested between 1974 and 1982. The top 10 percent of farms producing corn, for example, accounted for 42 percent of production in 1974 and 37 percent in 1982. Only orchard crops and vegetables, among crop commodities, and beef cows and hogs, among livestock commodities, showed the largest farms to be gaining market share. For all other farm commodities, the level of concentration either declined slightly or was steady, refuting the supposition that U.S. agricultural production is becoming more and more concentrated in the hands of a small number of very large producers.

This report compares several farm characteristics of the mid-1980's with those of a decade earlier to document the real amount of change. It looks at sources and levels of farm operator income and wealth, factor ownership and control, the organization of farm enterprises, and resource use. Farms are stratified into five groups based on their farm income:

- Rural residence farms, less than $10,000 in gross farm sales.
- Small family farms, gross farm sales ranging from $10,000-$39,999.
- Family farms, gross farm sales ranging from $40,000-$249,999.
- Large family farms, gross farm sales of $250,000-$499,999.
- Very large farms, gross farm sales of $500,000 or more.

Income and Wealth. Off-farm income has exceeded farm income in the farm sector since about 1967. But the relative importance of off-farm income is inversely related to farm size. It makes up virtually the entire operator family income on small family farms and rural residence farms, but only 4-5 percent of total operator family income on the very large farms. Net farm income is concentrated in the larger size groups. Very large farms and large family farms, the two largest size groups, together accrued from two-thirds to over four-fifths of net farm income in the early 1980's, but constitute less than 4 percent of all farms. Because of off-farm income, total operator family income is more equally distributed across farm size groups than net farm income is.

Farm operators' net worth, after peaking in 1981, declined each year thereafter. Farmers' net worth was $816.4 billion on January 1, 1984, 10 percent below the January 1981 peak. The decline in net worth resulted from asset value declines of over 5 percent between January 1981 and January 1984, and an increase of 18 percent in farm debt over the same period. Debt/asset ratios increased for all farm size groups between 1980 and 1984.

Ownership and Organization. Individuals, partnerships, and corporations whose primary occupation or business is farming owned half of the farmland in the United States in 1982. An additional 14 percent was owned by individual, partnership, and corporate farm operators whose principal occupation was something other than farming. The remaining 36 percent was owned by nonfarmers. Sole proprietors and husband-wife combinations made up 88 percent of farmland owners and owned over 70 percent of the land. The largest 1 percent of farmland owners owned 32 percent of farmland and the top 5 percent of owners owned 53 percent. Farmland ownership is most concentrated in the Pacific and Mountain regions and least concentrated in the Lake States and Corn Belt.

Production. Larger farms usually generate a higher proportion of their sales from the more intensive horticultural crops and fed cattle, while smaller family farms produce more grains, nonfed cattle, dairy products, and hogs. Horticultural crops contribute about one-fifth of very large farms' total sales. Grains contribute 30-40 percent of the total sales for the large family, family, and small family farms. Cattle is the most important commodity for both very large and rural residence farms; fed cattle account for over 80 percent of very large farm cattle sales, but only 10 percent of rural residence farm cattle sales. Large farms almost invariably have higher crop yields than smaller farms.

Technology affects the organization of the farm sector by contributing to increased levels of specialization and higher capital requirements. This in turn increases production and financial risks, which leads to the use of management practices similar to those of the industrial sector and vertical coordination in an effort to reduce risk. Strategies to reduce risk favor large farms, and consequently have contributed to the growth of very large farms and to the decline of family and small family farms.

There is a wide variation in the intensity of resource use across farm size groups, with the most intense use of resources being made by very large farms and the least intense use made by rural residence farms. Two measures — percent of cropland harvested and receipts per dollar of total assets — both show a strong positive relationship between farm size and the intensity of resource use.

The U.S. Farm Sector in the Mid-1980's

Donn A. Reimund

Nora L. Brooks

Paul D. Velde

Introduction

The structure of agriculture has undergone numerous changes in the past few decades. The tendency toward a bimodal distribution of farms became more pronounced as medium-sized operations either shrank to become manageable part-time businesses or grew to become viable full-time commercial ventures. This report looks at the distribution of farms across five sales classes. Profiles were developed for each size of farm to study its composition, the type of commodities it produced, its sources of income and wealth, and its ownership and control of factors of production.

We examined concentration of production for several commodities from two different perspectives. In the first, we used Gini indexes and distribution curves to see if the concentration of production changed for specific commodities as a result of changes in something other than the price level. The second looks at production of the specified commodity by type of farm. This analysis is done on both a national and regional level–the regions used are those where the greatest concentration of production of the commodity is found.

We used five classes of farms:

- Rural residence farms–less than $10,000 gross farm sales.
- Small family farms–gross farm sales of $10,000-$39,999.
- Family farms–gross farm sales of $40,000-$249,999.
- Large family farms–gross farm sales of $250,000-$499,999.
- Very large farms–gross farm sales of $500,000 or more.

Rural residence farms (less than $10,000 in gross farm sales per year) account for nearly half of all farms in the United States (tables 1 and 2). They account for about a third of all farms in the North Central States, about half in the Northeast and the West, and nearly two-thirds of all farms in the South. The farming activity here is normally an avocation or hobby. They serve primarily as residences for individuals with nonfarm occupations or retirement income who are attracted to rural living. Although the average net farm income on such places has been consistently negative by our accounting procedures over the past several years, the average total income of the operators has been equal to or above the national median family income in most years.

Small family farms ($10,000-$39,999 in gross farm sales per year) include slightly more than a fifth of all farms in the United States (tables 1 and 2). The heaviest concentration of these farms is in the North Central States, where they are slightly over a fourth of all farms. These small farms are frequently part-time operations whose proprietors combine off-farm earnings with farm income to achieve a satisfactory income level. Average net farm income on these farms has been very low over the past several years, with off-farm income being the major source of income for the average operator. This group of farmers had the lowest average total income of all farm operators in the first half of the 1980's.

Family farms ($40,000-$249,999 in gross farm sales per year) constitute a fourth of all farms in the United States (tables 1 and 2). They range from 14 percent of all farms in the South to just over a third of all North Central farms. Family farms are usually full-time commercial ventures, and have traditionally been the primary source of income for their operators. However, declining net farm incomes since the early 1980's have caused many family farmers to rely more on off-farm sources to maintain an adequate income level. In recent years, from 30 to over 50 percent of family farmers' total income has been from off-farm sources.

Large family farms ($250,000-$499,999 in gross farm sales per year) constitute only 2.6 percent of all U.S. farms (tables 1 and 2), ranging from 2 percent of all Southern farms to 3.7 percent of Western farms. These larger farms are chiefly family-controlled businesses. However, they are more likely to have multiple operators than farms in the next smaller size group. Nearly 40 percent of the large family farms are organized as partnerships and family corporations, compared with just under 20 percent of the next smaller group, family farms. Large family farms generate substantial net farm incomes, averaging over $60,000 in recent years. Off-farm income, although substantial, contributes less than 20 percent of total operator income for this size group.

Very large farms (more than $500,000 in gross farm sales per year) account for 1.2 percent of all farms in the United States (tables 1 and 2). Their regional concentration is about 1 percent of all farms in all regions except the West, where they are 3.3 percent of all farms. Most of these farms have multiple operators. Over 53 percent of them are operated as either partnerships or family corporations. An additional 6 percent

Table 1 — Number of farms by size group and region, 1982[1]

Farm size group	Northeast		North Central		South		West[2]		United States	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Rural residence	66,438	50.4	320,199	34.3	565,458	63.1	143,780	51.7	1,095,875	49.0
Small Family	23,650	17.9	253,641	27.2	175,795	19.6	54,681	19.6	507,767	22.7
Family	37,035	28.1	322,894	34.6	128,205	21.7	60,494	21.7	548,628	24.5
Large Family	3,259	2.5	26,841	2.9	18,250	3.7	10,313	3.7	58,663	2.6
Very large	1,461	1.1	8,862	1.0	8,417	3.3	9,057	3.3	27,797	1.2
All farms	131,843	100.0	932,437	100.0	896,125	100.0	278,325	100.0	2,238,730	100.0

[1]Excludes abnormal farms.
[2]Excludes Alaska; no sales class distribution available.

Source: 1982 Census of Agriculture

Table 2 — Distribution of farms by size group

Year	Very large		Large family		Family		Small family		Rural residence		All farms	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
1980	24,000	1.0	70,000	2.9	581,000	23.9	565,000	23.3	1,188,000	48.9	2,428,000	100
1981	24,000	1.0	71,000	2.9	587,000	24.1	565,000	23.3	1,187,000	48.7	2,434,000	100
1982	25,000	1.0	73,000	3.0	593,000	24.7	554,000	23.1	1,156,000	48.1	2,401,000	100
1983	24,000	1.0	69,000	2.9	572,000	24.2	551,000	23.2	1,154,000	48.7	2,370,000	100

The estimates in table 2 are derived from annual farm number estimates made by the Statistical Reporting Service and differ slightly from the Census of Agriculture farm counts shown in table 1. Regional farm number data are available only from the Census.

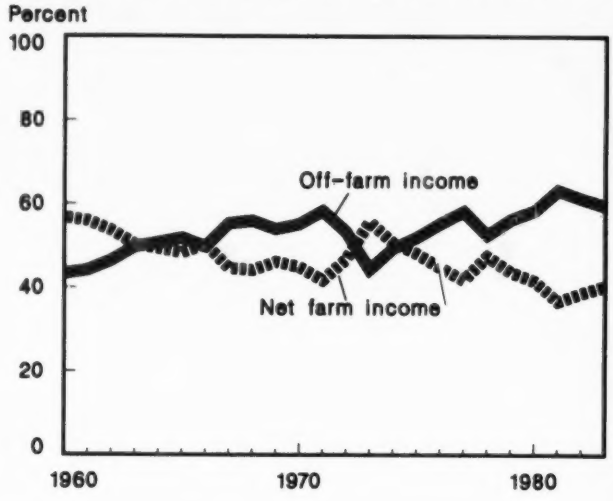
are operated as nonfamily corporations, over two-thirds of which have 10 or fewer shareholders. Detailed data for nonfamily corporate farms are shown in appendix tables 11-14. Net farm income on these very large farms averaged over $580,000 over the past several years, and contributed about 95 percent to total operator income.

Income Sources

Farmers receive income from both farm and off-farm sources. Off-farm income is now the primary source of farm sector income, having increased from 43 percent of the sector's total income in 1960 to 60 percent in 1983 (fig. 1). Net farm income includes net cash income from farming operations, Government payments, and noncash income such as the implicit rental value of the operator's dwelling and the value of farm-produced commodities consumed on the farm. Off-farm income is all income derived from sources off the farm, and includes wages and professional income, income from off-farm investments, and income from retirement and disability pensions.

Net farm income is concentrated in the larger farm size groups. Very large farms and large family farms, the two largest size groups, together generated between two-thirds and four-fifths of total net farm income in the early 1980's (table 3). Family size farms received 25-35 percent of total net farm income in the early 1980's. The percentage of total net farm income received by small family farms ranged from a high of just over 3 percent in 1983 to −1 percent in 1981. Net farm income for rural residence farms was negative throughout the early 1980's.

Figure 1
Net Farm and Off-farm Income as Percent of Total Farm Sector Income



Off-farm income is inversely related to farm size. It contributes only a small proportion (4-5 percent) of total operator family income on very large farms (table 4). However, on small family and rural residence farms, virtually all farm family income is derived from off-farm sources.

Over two-thirds of off-farm income earned by farm operators and members of their families was from wages and salaries in 1979, the latest year for which such data are available (table 5). Income from nonfarm businesses and professions contributed another 4 percent of off-farm income, raising the total percentage of off-farm income earned from nonfarm work to over three-fourths for all farm operator families.

There is a relationship between farm size and the source of off-farm income. The importance of nonfarm wages and salaries as an income source increases as farm size decreases, as does retirement and disability income. Investment income, which is slightly more important than wages and salaries for large-scale farm operator families, declines with farm size and accounts for less than 8 percent of off-farm income for rural residence farm families (table 5).

Farm operator family income is more equally distributed across farm size than is net farm income because of the high proportion of total income earned from off-farm sources by operators of smaller farms. Although well over two-thirds of aggregate net farm income accrued to the two top farm size groups during the early 1980's, they earned less than one-third of aggregate total income from farm and off-farm sources. At the other end of the farm size scale, rural residence farms had negative net farm income throughout the early 1980's, but earned slightly more than a third of aggregate total income (table 6).

Income per farm — net farm, off-farm, and total family income — for 1980-83 by farm size is shown in table 7. Total family income for all size groups was above the national median family income in every year. That was due, however, to the influence of the very high total incomes of the large and very large farms. Those two size groups together account for only 4 percent of all farms and the three smaller size groups did not fare nearly as well in relation to national median family income. Operator families on family size farms had total incomes above the national median in 2 of the 4 years. Operators of small family farm had the lowest total family incomes throughout the period.

Table 3 — Net farm income by farm size

Year	Very large	Large family	Family	Small family	Rural residence	All farms
			Million dollars			
1980	14,209	4,450	8,336	485	−704	26,776
1981	14,418	3,822	5,974	−220	−911	23,082
1982	14,587	4,034	6,920	39	−680	24,899
1983	13,486	4,314	9,629	873	−459	27,842

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 4 — Off-farm income by farm size

Farm size	1980		1981		1982		1983	
	Mil. dol.	*Percent of total*	*Mil. dol.*	*Percent of total*	*Mil. dol.*	*Percent of total*	*Mil. dol.*	*Percent of total*
Very large	574	3.9	621	4.1	676	4.4	680	4.8
Large family	867	16.3	942	20.0	1,009	20.0	1,013	19.0
Family	5,815	41.0	6,267	51.2	6,430	48.2	6,577	40.6
Small family	7,986	94.3	8,457	102.7	8,347	99.5	8,714	90.9
Rural residence	22,326	103.3	23,549	104.0	22,953	103.2	24,008	101.9
All farms	37,568	58.4	39,835	63.3	39,415	61.3	40,993	60.0

Source: Derived from *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 5 — Sources of off-farm income by farm size, 1979

Farm size	Total	Wages and salaries	Business and profession	Retirement and disability	Investment[1]	Other[2]
	1,000 dollars			*Percent*		
Very large	519,707	42.4	12.2	1.3	42.6	1.5
Large family	734,178	47.6	10.0	3.5	38.0	1.0
Family	5,022,824	53.1	11.9	5.5	28.2	1.3
Small family	6,703,163	65.5	10.1	9.4	14.5	.4
Rural residence	19,774,315	74.2	7.4	9.8	7.8	.8
All farms	32,754,186	68.1	8.8	8.8	13.6	.8

[1]Includes income from interest, dividends, estates, rental of nonfarm property, and lease payments for mineral rights.
[2]Includes income from public assistance, welfare, unemployment compensation, annuities, alimony, contributions from other persons, and other sources.

Source: *1978 Census of Agriculture; 1979 Farm Finance Survey*, U.S. Dept. of Commerce, Vol. 5, Part 6, table 34.

Sources of Wealth

Farm operators' wealth, after peaking in 1981, declined each year through 1983. Farm operators' net worth (including farm households) stood at $816.4 billion on January 1, 1984, 10 percent below the January 1981 peak of $907.8 billion. The decline in net worth was the result of lower asset values (down more than 5 percent between January 1981 and January 1984) and an increase in farm debt (18 percent).

Assets

Farm operators' assets consist of physical farm assets, farm financial assets, and nonfarm assets. Physical farm assets include farm real estate, livestock and poultry, machinery and motor vehicles, stored crops, and household goods. Financial farm assets include currency, deposits, and investments in farmer cooperatives. Nonfarm assets include nonfarm property, investments in nonfarm businesses, and equipment for nonfarm uses.

The value of physical farm assets, which constitute about 95 percent of farm assets, reached a peak of $432,000 per farm in 1981 following a steep increase during the inflationary 1970's. By 1984, the per farm value of physical farm assets had fallen by 6 percent from the 1981 peak to $414,000 (table 8). The value of farm real estate, which is about four-fifths of the value of all physical farm assets, declined by nearly 8 percent nationally between 1981 and 1984, from $340,000 to $323,000 per farm. The decline in farm real estate values, however, was not equally distributed across regions. The heaviest losses were in the Corn Belt and Central Plains States, where declines exceeding 40 percent were recorded between 1981 and 1985, the Lake States, and the South (fig. 2).

The value of financial farm assets increased by more than a fifth, from $18,000 to $22,000 per farm between 1980 and 1984 (table 9). Investments in cooperatives, with a growth of nearly 36 percent, accounted for most of the increase. Investments in cooperatives increased from 51 percent of financial farm assets in 1980 to 56 percent in 1984.

Table 6 — Distribution of aggregate net farm income, off-farm income, and total income by farm size

Farm size	1980 income			1981 income			1982 income			1983 income		
	Net farm	Off-farm	Total	Net farm	Off-farm	Total	Net farm	Off-farm	Total	Net farm	Off-farm	Total
						Percent						
Very large	53.1	1.5	23.0	62.5	1.6	23.9	58.6	1.7	23.7	48.4	1.7	20.6
Large family	16.6	2.3	8.3	16.6	2.4	7.6	16.2	2.6	7.8	15.5	2.5	7.7
Family	31.1	15.5	22.0	25.9	15.7	19.5	27.8	16.3	20.8	34.6	16.0	23.5
Small family	1.8	21.3	13.2	−1.0	21.2	13.1	.2	21.2	13.0	3.1	21.3	13.9
Rural residence	−2.6	59.4	33.6	−3.9	59.1	36.0	−2.7	58.2	34.6	−1.6	58.6	34.2
All farms	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983,* ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 7 — Net farm, off-farm, and total income per farm operator family by farm size

Year and income source	Very large	Large family	Family	Small family	Rural residence	All farms	U.S. median family income
			Dollars				
1980:							
Net farm income	593,284	63,571	14,348	858	−591	11,029	
Off-farm income	23,986	12,385	10,009	14,135	18,793	15,474	
Total income	617,270	75,956	24,357	14,993	18,202	26,503	21,023
1981:							
Net farm income	590,328	53,831	10,177	−388	−768	9,483	
Off-farm income	25,418	13,268	10,676	14,968	19,839	16,366	
Total income	615,746	67,099	20,853	14,580	19,071	25,849	22,388
1982:							
Net farm income	580,975	55,260	11,669	70	−589	10,373	
Off-farm income	26,912	13,822	10,843	15,067	19,856	16,421	
Total income	607,887	69,082	22,512	15,137	19,267	26,794	23,433
1983:							
Net farm income	567,585	62,522	16,834	1,584	−398	11,749	
Off-farm income	28,603	14,681	11,498	15,815	20,805	17,299	
Total income	596,188	77,203	28,332	17,399	20,407	29,048	24,500

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983,* ECIFS 3-3 U.S. Dept. Agr., Econ. Res. Serv.

Although investments in cooperatives make up over half of total financial farm assets, their relative importance is much greater for large farms than small. Very large farms held about nine-tenths of their financial assets in investments in cooperatives in 1984; rural residence farms held only about 12 percent. Very large farms, just over 1 percent of all farms, hold nearly 20 percent of the total value of farmer investments in cooperatives. Smaller farms hold most of their financial assets in deposits and currency, which made up 55 percent of the financial assets of small family size farms in 1984 and nearly 75 percent of the financial assets of rural residence farms.

There is no data series on farmers' nonfarm assets. The only available data are for 1979, from the 1979 Census Farm Finance Survey.[1] According to this source, farmers owned $36.3 billion of nonfarm assets, slightly less than 6 percent of their total assets (table 10). Nonfarm assets were more important to the balance sheets of small farm operators than to operators of larger farms. Over 10 percent of total assets of rural residence farm operators were nonfarm assets, compared with 3 percent for very large farm operators. Rural residence farms owned about 40 percent of all nonfarm assets owned by farm operators in 1979.

[1]U.S. Dept. of Commerce, Bureau of the Census. *1978 Census of Agriculture: 1979 Farm Finance Survey*, AC 78-SR-6.

Table 8 — Physical farm assets per farm by farm size

Year and asset	Very large	Large family	Family	Small family	Rural residence	All farms
			1,000 dollars			
1980:						
Real estate	2,887	1,310	597	233	98	311
Livestock and poultry	484	107	43	17	6	25
Machinery and motor vehicles	294	156	82	31	11	40
Crops stored	142	84	34	6	1	14
Household goods	12	12	8	6	7	7
Total[1]	3,819	1,667	765	294	123	397
1981:						
Real estate	3,128	1,427	649	254	106	340
Livestock and poultry	469	106	43	17	6	25
Machinery and motor vehicles	308	164	86	33	12	42
Crops stored	143	88	37	7	1	15
Household goods	13	13	9	7	7	8
Total[1]	4,115	1,797	824	317	133	430
1982:						
Real estate	3,083	1,405	640	249	105	341
Livestock and poultry	412	92	37	15	5	22
Machinery and motor vehicles	326	173	91	35	13	45
Crops stored	148	87	36	7	1	15
Household goods	14	14	10	7	8	9
Total[1]	3,983	1,772	815	313	132	432
1983:						
Real estate	2,989	1,365	619	241	101	325
Livestock and poultry	418	95	38	15	5	22
Machinery and motor vehicles	343	183	96	36	13	47
Crops stored	171	103	43	8	1	17
Household goods	16	16	11	8	9	10
Total[1]	3,937	1,762	808	309	130	421
1984:[2]						
Real estate	2,971	1,357	615	240	101	323
Livestock and poultry	461	12	39	16	6	21
Machinery and motor vehicles	334	178	94	35	13	46
Crops stored	138	83	35	7	1	14
Household goods	18	17	12	9	10	10
Total[1]	3,922	1,647	795	307	130	414

[1]Totals may not equal sum of items due to rounding.
[2]Preliminary.

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Liabilities

Liabilities and debts of all farmers as of January 1984 totaled $214.7 billion, 20.8 percent of total farm assets. On a per farm basis, liabilities and debt totaled $91,000 (table 11). Since 1980, farm liabilities have risen nearly 30 percent from $165.8 billion. About 45 percent of total farm debt was owed by family size farms in 1984, the same percentage as in 1980. Very large farms owed 18 percent of the total 1984 farm debt, large family farms 15 percent, small family farms 12 percent, and rural residence farms 9 percent.

Real estate debt accounted for slightly over half of total farm debt in 1984. Real estate debt by farm size ranged from 65 percent of total farm debt for rural residence farms to 42 percent for very large farms. Real estate debt was over half of total farm debt for all size groups except very large farms.

Net Worth

Farm operators' net worth per farm, after peaking at $373,000 in 1981, declined by $28,000 by 1984, and was $2,000 lower than in 1980 (table 12). The decline in equity was the result of lower asset values and rising farm debts between 1981 and 1984.

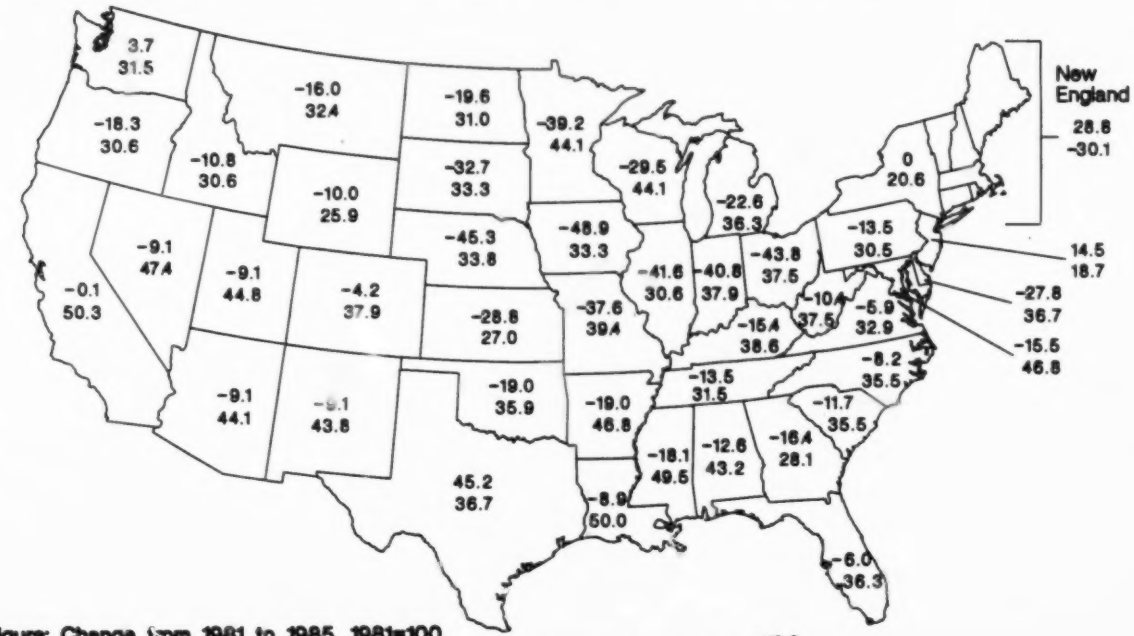
The decline in equity was steepest for larger farms. Operators' equity per farm fell by 15 percent for large family farms between 1981 and 1984, and 12.6 percent for very large farms. At the other end of the scale, operators' equity fell by less than 4 percent for rural residence farms and less than 6 percent for small family farms. Operators' equity on family size farms fell by 7.6 percent.

Debt/asset ratios increased substantially during the early 1980's. The average debt/asset ratio for all farms rose from 16.5 percent in 1980 to 20.8 percent in 1984 (table 13). The two largest farm size groups had the biggest increases in their debt/asset ratios.

Declining asset values since 1981 have meant that many farmers suffered sizable capital losses during the early eighties in contrast to the substantial capital gains of the middle and late seventies, when farm asset values were appreciating rapidly. Real capital gains (defined as the change in the real value of physical farm assets after subtracting real net investment plus the changes in the real values of currency, demand deposits, and farm debts as a percent of operators' equity) averaged nearly 10 percent per year from 1973-79. From 1980-83, real capital losses averaged over 5 percent of

Figure 2

Change in Average Value of Farm Real Estate Per Acre, 48 Contiguous States, February 1977 - April 1985



Upper figure: Change from 1981 to 1985, 1981=100
Lower figure: Change from 1977 to 1981, 1981=100

U.S. average 48 States: -19.0 / 43.6

Table 9 — Financial farm assets per farm by farm size

Year and asset	Very large	Large family	Family	Small family	Rural residence	All farms
			1,000 dollars			
1980:						
Deposits and currency	28	14	8	6	5	7
U.S. savings bonds	8	4	2	2	1	2
Investments in cooperatives	259	45	15	4	1	9
Total[1]	295	63	25	12	7	18
1981:						
Deposits and currency	29	14	8	6	5	7
U.S. savings bonds	7	3	2	2	1	2
Investments in cooperatives	296	50	15	4	1	9
Total[1]	332	67	25	12	7	18
1982:						
Deposits and currency	30	15	8	7	5	7
U.S. savings bonds	7	3	2	1	1	2
Investments in cooperatives	332	53	16	4	1	10
Total[1]	369	71	26	12	7	19
1983:						
Deposits and currency	32	16	9	7	6	7
U.S. savings bonds	7	3	2	1	1	1
Investments in cooperatives	381	61	18	4	1	11
Total[1]	420	80	29	12	8	19
1984:[2]						
Deposits and currency	33	17	9	7	6	8
U.S. savings bonds	7	3	2	1	1	2
Investments in cooperatives	370	63	20	5	1	12
Total[1]	410	83	31	13	8	22

[1]Totals may not equal sum of items due to rounding.
[2]Preliminary.

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 10 — Farm operators' nonfarm assets by farm size, 1979

Farm size	Nonfarm assets			
	Million dollars	*Percent of farmers' total nonfarm assets*	*Dollars per farm*	*Percent of farmers total assets*
Very large	1,904.6	5.2	79,722	3.0
Large family	2,532.7	7.0	38,448	3.7
Family	8,630.4	23.7	15,405	3.4
Small family	8,707.7	24.0	16,468	7.6
Rural residence	14,571.0	40.1	12,396	10.3
All farms	36,346.4	100.0	15,439	5.7

Source: *1978 Census of Agriculture: 1979 Farm Finance Survey.*

operators' equity per year for the farm sector. These losses, combined with very low returns to equity from current income, resulted in negative total real returns to equity for the farm sector during the early eighties.

The combination of low current returns and declining farm asset values caused cash flow shortfalls for many farmers. Farmers with debt/asset ratios of 40 percent or higher are likely to be under serious financial stress. Large family and family size farms with high debt/asset ratios (40 percent or higher) are the most likely to have financial difficulties. Very large farms, which tend to operate a higher proportion of leased assets than smaller farms, have a smaller proportion of their costs committed to asset ownership, and are often able to operate with higher debt/asset ratios. Small family and rural residence farms rely more on off-farm income, which can be used to meet farm operating costs and debt repayment. The number of farms with debt/asset ratios of 40 percent or higher and their cash surplus or shortfall is shown in table 14.

Factor Ownership and Control

Land is the major factor of production in farming, accounting for about three-fourths of the sector's total asset value. Consequently, who owns or controls the land is of paramount importance to the development and productivity of agriculture. This section examines landownership and tenure patterns.

Farm Operator Tenure

The Census of Agriculture reported 932 million acres of land in farms in 1982, excluding abnormal farms. Of this, 598 million acres (64 percent of the total) were owned by the operator. Farm operators rented or leased (in) from others 382 million acres (41 percent of land in farms), and rented or leased (out) to other farmers 48 million acres or 5 percent of land in farms (table 15).

Regionally, the highest proportion of operator-owned land, 77 percent, was in the Northeast; the Western States had the lowest proportion of operator-owned land at 62 percent. The highest proportion of land rented in by the operator (42 percent) was in the North Central region, and the lowest proportion of land rented in (25 percent) was in the Northeast. The Northeast also had the lowest proportion of land rented or leased to others by farm operators (nearly 3 percent of land in farms), while the South had the highest proportion (6 percent) of land rented out.

Rural residence farms had the highest proportions of owned land and land rented out, and the lowest ratio of land rented in. Large family farms had the lowest ratios of owned land and land rented out, and the highest ratio of land rented in.

The ratio of land rented by farm operators to total land in farms has increased slightly over the past several years, from 37.5 percent in 1969 to 41 percent in 1982. During the same period, the percentage of tenant farmers declined from 12.9 to 11.6 percent of all farm operators, and the percentage of farmland operated by tenant farmers declined from 15.6 to 11.9 percent. The percentage of farmland operated by part-owner operators increased from 33.5 percent in 1969 to 55.8 percent in 1982, while the land operated by full-owner farmers decreased from 50.8 to 32.3 percent.

Part-owner farms tend to be larger than either full-owner or tenant farms. Part-owner farms averaged 794 acres in 1982, compared with 428 acres for tenant farms and 227 acres for full-owner farms. Part-owner farms, about 30 percent of all farms, are nearly 60 percent of farms in the two largest farm size groups, and about half of the farms in the family size group. By contrast, part-owner farms constitute about 30 percent of the small family farm group and 15 percent of the

Table 11 — Farm liabilities per farm by farm size

Year and type of liability	Very large	Large family	Family	Small family	Rural residence	Average, all farms
			1,000 dollars			
1980:						
Real estate debt	526	187	68	20	8	35
Nonreal estate debt	776	166	60	17	5	33
Total debt[1]	1,302	353	128	37	12	68
1981:						
Real estate debt	581	207	75	22	9	39
Nonreal estate debt	802	182	65	18	5	36
Total debt[1]	1,382	389	140	40	13	75
1982:						
Real estate debt	637	227	82	24	10	44
Nonreal estate debt	832	199	73	20	5	40
Total debt[1]	1,469	426	155	44	15	84
1983:						
Real estate debt	685	244	88	26	10	46
Nonreal estate debt	970	239	85	22	6	45
Total debt[1]	1,655	484	173	48	16	91
1984:[2]						
Real estate debt	698	249	90	26	11	47
Nonreal estate debt	954	227	81	22	6	43
Total debt[1]	1,652	476	171	48	16	91
			Percent			
Change 1980-84:						
Real estate debt	32.7	33.2	32.4	30.0	37.5	34.3
Nonreal estate debt	22.9	36.7	35.0	29.4	20.0	30.3
Total debt	26.9	34.8	33.6	29.7	33.3	33.8

[1]Totals may not equal sum of items due to rounding. [2]Preliminary.

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 12 — Operator equity per farm by farm size

Year	Very large	Large family	Family	Small family	Rural residence	All farms
			1,000 dollars			
1980:						
Total assets	*4,114*	*1,730*	*790*	*306*	*130*	*415*
Total liabilities	*1,302*	*353*	*128*	*37*	*12*	*68*
Operator equity	*2,812*	*1,377*	*662*	*269*	*118*	*347*
1981:						
Total assets	4,447	1,864	849	329	140	448
Total liabilities	1,382	389	140	40	13	75
Operator equity	3,065	1,475	709	289	127	3
1982:						
Total assets	4,352	1,843	841	325	139	451
Total liabilities	1,469	426	155	44	15	84
Operator equity	2,883	1,417	686	281	124	367
1983:						
Total assets	4,357	1,842	837	321	138	440
Total liabilities	1,655	484	173	48	16	91
Operator equity	2,702	1,358	664	273	122	349
1984:[1]						
Total assets	4,332	1,730	826	320	138	436
Total liabilities	1,652	476	171	48	16	91
Operator equity	2,680	1,254	655	272	122	345

[1]Preliminary.

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983*, ECIFS 3-3, U.S. Dept. Agr., Econ. Res. Serv.

Table 13 — Debt/asset ratios by farm size

Farm size	1980	1981	1982	1983	1984[1]
			Percent		
Very large	31.7	31.5	33.8	38.0	38.1
Large family	20.4	20.9	23.1	26.3	27.5
Family	16.2	16.5	18.4	20.7	20.7
Small family	12.1	12.1	13.6	14.8	14.9
Rural residence	9.6	9.7	10.7	11.4	11.6
Average all farms	16.5	16.7	18.6	20.7	20.8

[1]Preliminary.

rural residence farms. Over half of the small family farms and over three-fourths of the rural residence farms are operated by full owners.

The proportion of rented or leased farmland operated by part owners has been increasing for several decades. In 1982, part owners operated over 70 percent of rented farmland. The increasing proportion of land operated by part owners is due to the limited availability of farmland to purchase, and to capital limitations. Many farmers have chosen to lease rather than purchase additional land as a means of expanding the size of their operations. In addition, some tenant farmers have purchased some land and thus been reclassified to part-owners.

Farmland Ownership

Individuals, partnerships, and corporations whose primary occupation or business is farming owned half of the farmland in the United States, according to the 1982 Census of Agriculture. An additional 14.1 percent was owned by individuals, partnerships, or corporations whose principal occupation was something other than farming. The remaining 35.9 percent of farmland was owned by nonfarmers.

Only limited information is available on the identification of nonfarmer owners of farmland. The best data are from the 1978 Landownership Survey conducted by the Department of Agriculture.[2] According to that survey, farmers made up 25 percent of noncorporate owners of farmland and owned 56.4 percent of privately held noncorporate farmland. Retired persons, 24 percent of noncorporate landowners, owned nearly 17 percent of noncorporate farmland. The remaining noncorporate farmland was owned by persons in white collar, blue collar, and other occupations (fig. 3). A large proportion of the retired farmland owners are probably retired farmers who rent their land to heirs or other farmers to provide a retirement income.

[2]James A. Lewis, *Landownership in the United States, 1978*, AIB-435, U.S. Dept. of Agriculture, Economics, Statistics, and Cooperatives Service, Apr. 1980.

Table 14 — Number of farms, and average cash surpluses or shortfalls by debt/asset ratio categories and sales class, January 1, 1985[1]

Item	Unit	Very large farms (more than $500,000)	Large family farms ($250,000-$499,999)	Family farms $100,000-$249,999	Family farms $40,000-$99,999	Small family farms $20,000-$39,999	Small family farms $10,000-$19,999	Rural residence (less than $10,000)	All farms
Highly leveraged farms[2]	Number	6,417	16,184	47,411	51,285	20,708	15,623	36,577	194,206
Percent of sales class	Percent	21.1	23.6	20.7	16.8	10.4	8.1	5.7	11.6
With cash shortfall	Percent	50.0	47.0	57.0	70.0	92.0	60.0	48.0	62.4
Average shortfall	Dollars	2,075	6,577	13,238	23,933	20,869	5,977	25.0	NA
Very highly leveraged farms[3]	Number	2,611	6,118	17,583	18,540	8,328	6,581	12,069	71,830
Percent of sales class	Percent	8.6	8.9	7.7	6.1	4.2	3.4	1.9	4.3
With cash shortfall	Percent	47.0	69.0	71.0	85.0	73.0	87.0	73.0	76.0
Average shortfall	Dollars	6,577	35,546	35,779	31,354	20,618	25,646	14,261	NA
Technically insolvent farms[4]	Number	1,827	3,993	10,391	13,982	8,011	5,820	6,185	50,209
Percent of sales class	Percent	6.0	5.7	4.5	4.6	4.0	3.0	1.0	3.0
With cash shortfall	Percent	58.0	60.0	69.0	76.0	91.0	76.0	78.0	75.8
Average shortfall	Dollars	147,879	9,308	38,349	33,518	28,834	17,318	13,695	NA

NA = Not applicable.

[1]The Farm Cost and Returns Survey undercounted the farms in the smallest size category by screening out farms that did not have actual sales of $1,000 in 1984. The undercount of these farms is approximately 500,000 farms. Other sales classes are only minimally affected by the undercount.

[2]Debt/asset ratios between 40 and 70 percent in the 1984 operating year.

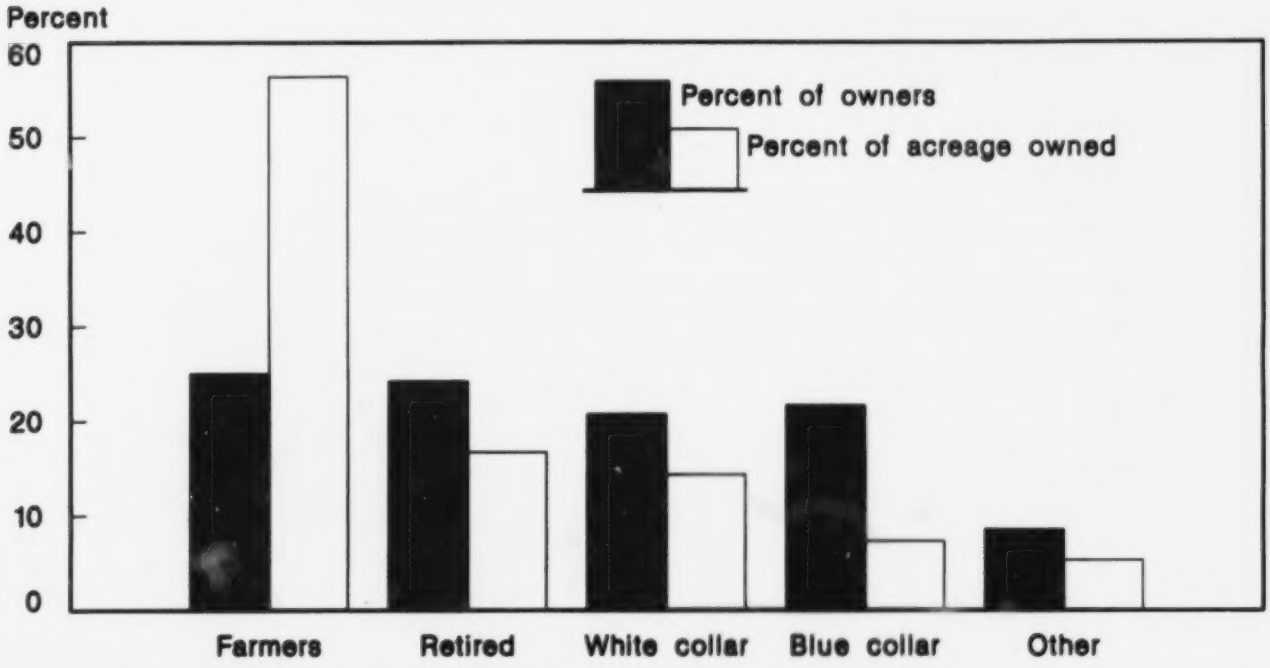
[3]Debt/asset ratios between 70 and 100 percent in the 1984 operating year.

[4]Debt/asset ratios ovar 100 percent in the 1984 operating year.

Source: Compiled from *Financial Characteristics of U.S. Farms, January 1985*, AIB-495, U.S. Dept. of Agriculture, Economic Research Service, July 1985.

Figure 3

Occupation of Owners of Farm and Ranch Land, 1978



Other includes categories like military, homemaker, unemployed.

Farmland ownership by form of business organization is largely by individuals and families. Sole proprietors and husband-wife combinations made up 88 percent of the owners, and owned over 70 percent of the land. Family partnerships and family corporations together owned nearly 19 percent of the farmland. Nonfamily corporations owned 4 percent of the farmland, and nonfamily partnerships owned 2 percent of the farmland (fig. 4).

Ownership of farmland is concentrated in the hands of relatively few. The top 1 percent of owners held 32 percent of farmland and the top 5 percent owned 53 percent of the farmland. Farmland ownership is most concentrated in the Pacific and Mountain regions and least concentrated in the Lake States and Corn Belt (fig. 5).

Farm Organization

The manner in which farms are organized to conduct their business both affects and is affected by the scale of the farming operation and the types of commodities produced. A large commercial farm, for example, will probably have its farming activities organized differently than a small part-time family farm or a rural residence farm where farming is often a secondary activity rather than the operator's primary source of livelihood. There are no direct measures of farm organization, for each farm is a unique situation and this uniqueness is reflected in its organization. But several variables can be measured to indicate variations in farm organization. Here, we examine a few of these variables: farming enterprises, technology, yields, and intensity of resource use.

Table 15 — Tenure by farm size, 1982

Farm size	Total land in farms		Land owned by operator		Land rented by operator		Land rented to others	
	1,000 acres	*Percent*[1]	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*
U.S. total:								
Very large	103,590	100.0	63,588	61.4	44,017	42.5	4,015	3.9
Large family	106,023	100.0	59,506	56.1	48,875	46.1	2,357	2.2
Family	435,351	100.0	251,136	57.7	197,414	45.3	13,199	3.0
Small family	166,316	100.0	115,809	69.6	62,732	37.7	12,225	7.4
Rural residence	120,814	100.0	107,660	89.1	29,298	24.3	16,144	13.4
All farms	932,094	100.0	597,699	64.1	382,336	41.0	47,940	5.1
Northeast:								
Very large	1,020	100.0	692	67.8	345	33.8	19	1.9
Large family	1,758	100.0	1,152	65.5	614	34.9	16	.9
Family	10,685	100.0	7,530	70.5	3,273	30.6	121	1.1
Small family	3,566	100.0	2,836	79.5	847	23.8	116	3.3
Rural residence	5,905	100.0	5,559	94.1	701	11.9	358	6.1
All farms	22,921	100.0	17,769	77.5	5,780	25.2	630	2.7
North Central:								
Very large	19,669	100.0	11,626	59.1	8,565	43.6	527	2.7
Large family	35,233	100.0	19,280	54.7	16,608	47.1	652	1.9
Family	196,293	100.0	110,049	56.1	91,592	46.7	5,349	2.7
Small family	66,385	100.0	47,841	72.1	24,201	36.5	5,657	8.5
Rural residence	29,452	100.0	30,063	102.1	5,631	19.1	6,245	21.2
All farms	347,032	100.0	218,859	63.1	146,600	42.2	18,430	5.3
South:								
Very large	34,327	100.0	21,298	63.9	13,971	40.7	1,572	4.6
Large family	31,451	100.0	16,911	53.8	15,673	49.8	1,135	3.6
Family	104,970	100.0	58,324	55.6	50,954	48.5	4,311	4.1
Small family	58,590	100.0	40,843	69.7	21,808	37.2	4,064	6.9
Rural residence	63,367	100.0	55,343	87.3	14,169	22.3	6,148	9.7
All farms	292,705	100.0	193,349	66.1	116,575	39.8	17,230	5.9
West:								
Very large	48,573	100.0	29,342	60.4	21,126	43.5	1,893	3.9
Large family	37,576	100.0	22,159	59.0	15,972	42.5	552	1.5
Family	122,782	100.0	75,082	61.1	51,111	41.6	3,391	2.8
Small family	37,554	100.0	24,263	64.6	15,672	41.7	2,388	6.4
Rural residence	21,160	100.0	16,582	78.4	7,975	37.7	3,393	16.1
All farms	267,645	100.0	167,406	62.5	111,856	41.8	11,617	4.3

[1]Components may not add to exactly 100 percent due to rounding error.

Farm Enterprises

One way of looking at the relationship between farm size and organization is to examine the relative importance of various commodities for different farm size groups. Table 16 shows the aggregate contribution of major classes of commodities to the total sales of each farm size group. These data point out the differences in enterprise orientation among the size groups. Intensive horticultural crops — vegetables, fruits and nuts, and nursery products — contribute about one-fifth of the total commodity sales of very large farms, about a tenth for large family farms, and 5-6 percent for family, small family, and rural residence farms. In contrast, grains are the most important commodities for large family, family, and small family farms, contributing from over 30 to nearly 40 percent of total commodity sales. Cattle is the most important commodity for both very large and rural residence farms. However, fed cattle constitute over 80 percent of the total cattle sales from very large farms, but only 10 percent of rural residence sales of farm cattle. In general, larger farms generate a higher proportion of their sales from the more intensive horticultural crops and fed cattle, while smaller family farms are more likely to produce grains, nonfed cattle, dairy products, and hogs.

Table 17 shows the percentage of sales from each commodity accounted for by the different farm size groups. Very large farms dominate the sales of cotton, horticultural crops, poultry, and fed cattle. Family size farms dominate the sales of grains, tobacco, hay and field seeds, dairy products, and hogs. Rural residence farms account for a significant share (about 10 percent) of tobacco, hay and field seeds, and sheep sales.

Technology

Technological innovations in agriculture over the past few decades fall into two basic classes, those that raise yields and those that reduce labor. Yield-increasing innovations include improved, higher yielding crop varieties and improved livestock and poultry strains that have faster growth rates or better feed conversion ratios.[3] Labor-reducing innovations involve the substitution of mechanical power or chemicals for labor, and include improved and larger machinery, mechanized harvesting of several crops, mechanized or automated livestock- and

[3]Feed conversion ratio is a measure of the relationship of feed consumed by livestock or poultry and the amount of product — finished weight of animal, eggs, milk. It is expressed as the pounds of feed consumed per unit of output.

Figure 4

Business Organization of Landowners, 1978

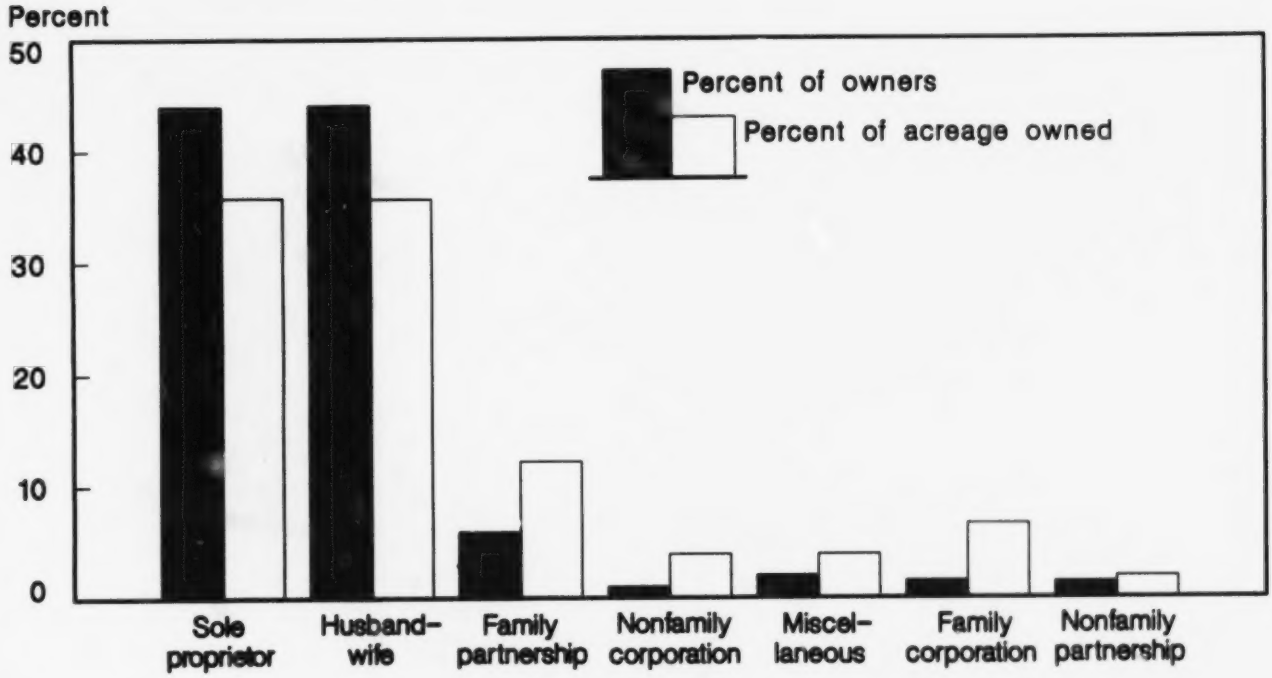


Table 16 — Farm size and commodities produced, 1982

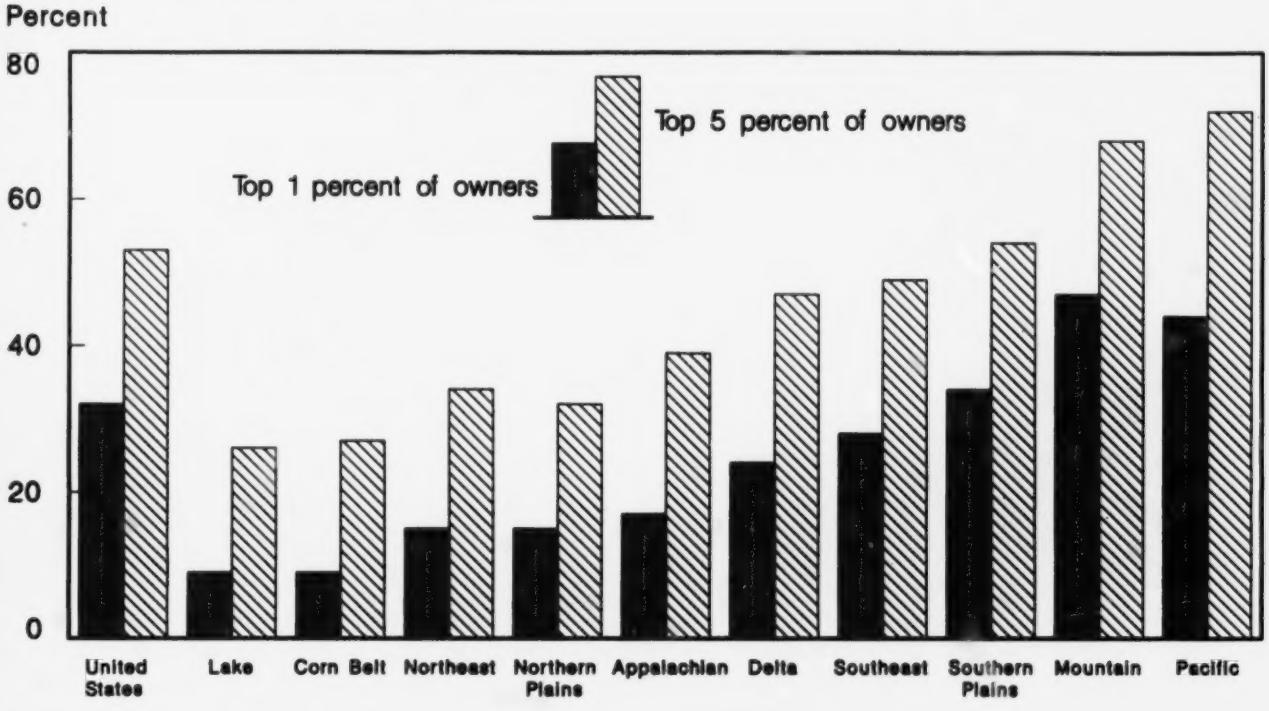
Commodity	Very large	Large family	Family	Small family	Rural residence	All farms
			Percent of farm sales			
Grains	10.1	31.7	38.4	37.6	20.7	27.6
Cotton	3.5	3.1	1.8	1.2	.5	2.5
Tobacco	.3	1.4	2.5	6.4	8.9	2.1
Hay & field seeds	1.2	1.4	1.6	3.6	6.3	1.8
Vegetables	6.7	2.7	1.1	1.4	1.7	3.1
Fruits & nuts	7.1	3.9	2.8	3.5	3.0	4.4
Nursery products	5.6	2.6	1.3	1.4	1.3	2.9
Other crops	4.2	3.5	1.9	1.1	.6	2.8
Poultry	11.8	10.7	4.6	.8	.6	7.4
Dairy products	7.3	12.1	18.2	7.5	.8	12.4
All cattle	36.3	16.5	15.2	25.8	45.2	24.0
Fed cattle	29.7	7.3	4.3	3.5	4.6	13.4
Hogs	4.0	9.9	9.5	7.3	5.4	7.5
Sheep	.5	.3	.4	.7	1.5	.5
Other livestock	1.4	.7	.7	1.6	3.5	1.0
All commodities[1]	100.0	100.0	100.0	100.0	100.0	100.0

[1]Individual items may not add to total due to rounding.

Source: *1982 Census of Agriculture*, U.S. Dept. of Commerce.

Figure 5

Concentration of Landownership by Region: Farm and Ranch Land, 1979



poultry-feeding systems, and chemical herbicides that reduce the labor required to control weeds and pests.

These technological innovations have had a large impact on the organization of the farm sector. They have generally reduced costs, increased output, and increased size. This has allowed fewer farmers to produce a larger output at lower costs now than was possible a few years ago. Consequently, technology has been a key factor in the decline in farm numbers and increased farm size.

Technological innovation has also affected farm organization by contributing to increased levels of commodity specialization and by raising the capital requirements for farming. This, in turn, has increased both the production and financial risks of farmers. To cope with these risks, new strategies and institutions for risk aversion have developed. These strategies include vertical coordination, including heavy reliance on forward contracting and pricing, less control of product flows and characteristics by farm producers and more control by processors and marketers, and the use of financial management practices similar to those employed in the industrial sector of the economy. These risk aversion strategies have favored larger producers over small and medium-sized farms, and consequently have contributed to the growth of very large farms and the decline in the numbers of family size and small farms.

Early adopters of new technological innovations benefited through lower production costs and higher output compared with farmers using older technologies. Their higher returns encouraged them to expand the scale of their farming operations. However, as the new methods become used by more and more farmers, commodity prices fall to levels commensurate with the higher total output and lower production costs associated with the new technologies. Farmers still producing under the old technology are faced with several options: adopt the new technology to operate at a profit; reduce their farming activities to a part-time basis and find off-farm employment to supplement their incomes; continue operating at a loss; or leave farming altogether.

Yields

Large farms get higher yields (table 18). Why that is so is uncertain but several factors may play a role:

- Large farm operators employ better management and cultural practices than operators of smaller farms.
- Larger farms have better quality resources than smaller farms.
- Larger farms are located in areas better suited to the production of a specific commodity. For example, corn is produced on larger farms in the Corn Belt, where yields are higher, than it is in the South, where yields are lower.

These factors probably contribute to large farms' better yields.

Intensity of Resource Use

There is a wide variation in the intensity of resource use by farm size, with the very large farms using resources most intensely and rural residence farms using them least intensely. Two measures, percent of cropland harvested (table 19) and receipts per dollar of total assets, demonstrate that.

Table 17 — Commodity sales by farm size, 1982

Commodity	Very large	Large family	Family	Small family	Rural residence	All farms[1]
			Percent of commodity sales			
Grains	11.9	17.3	57.5	11.2	2.0	100.0
Cotton	46.5	19.1	29.7	4.1	.5	100.0
Tobacco	5.1	10.1	48.3	25.1	11.4	100.0
Hay & field seeds	22.8	12.3	38.2	17.0	9.7	100.0
Vegetables	69.3	10.4	15.1	3.8	1.4	100.0
Fruits & nuts	52.0	13.3	26.4	6.4	1.8	100.0
Nursery products	62.3	13.3	19.2	3.9	1.2	100.0
Other crops	48.8	18.9	28.3	3.3	.6	100.0
Poultry	51.3	21.6	25.9	.9	.2	100.0
Dairy products	19.1	14.8	61.0	5.0	.2	100.0
All cattle	49.3	10.4	26.3	8.9	5.1	100.0
Fed cattle	74.4	8.5	13.8	2.2	1.0	100.0
Hogs	17.5	19.9	52.6	8.0	1.9	100.0
Sheep	32.9	11.5	33.0	13.5	9.5	100.0
Other livestock	42.6	9.9	26.6	12.0	8.9	100.0
All commodities	32.5	15.1	41.5	8.2	2.7	100.0

[1]Individual items may not add to totals due to rounding.

Source: *1982 Census of Agriculture*, U.S. Dept. of Commerce.

Table 18 — Crop yields by farm size group, selected commodities, United States, 1982

Crop	Unit	Very large farms	Large family	Family	Small family	Rural residence	All farms
Corn	bu/acre	122.5	118.9	107.7	91.0	73.3	107.5
Wheat	bu/acre	45.2	39.2	32.8	27.3	23.9	33.5
Soybeans	bu/acre	32.0	32.8	31.4	27.2	22.8	30.7
Rice	cwt/acre	52.8	45.6	45.3	40.0	36.0	47.9
Dry edible beans	cwt/acre	16.7	15.2	14.1	12.7	11.3	14.4
Potatoes	cwt/acre	302.3	249.7	244.9	172.4	117.8	263.9
Cotton	bales/acre	1.92	1.35	.83	.55	.51	1.16
Tobacco	1b/acre	2,204.1	2,206.6	2,090.5	1,956.7	1,688.7	2,008.5
Peanuts	1b/acre	3,188.0	3,009.4	2,556.8	1,811.6	1,290.1	2,662.1
Sugar beets	tons/acre	23.2	20.1	19.1	18.1	16.8	20.5
Alfalfa hay	tons/acre	4.8	3.7	3.0	2.5	2.1	3.0

Source: Compiled from data in the *1982 Census of Agriculture*, U.S. Dept. of Commere.

Very large farms, with receipts of 39 cents per dollar of assets in 1983, had a receipts-to-asset ratio more than twice that of large family farms, with receipts of 18 cents per dollar of assets. Family size farms had 14 cents in receipts for each dollar of assets, small family farms 9 cents, and rural residence farms only 5 cents. Receipts per dollar of assets averaged 15 cents for all farms.

Concentration of Production and Land Input by Commodity

Changes in the structure of agriculture — a long-term decline in the number of farms, larger average farm size, and increased concentration of agricultural resources and production among larger farms — have raised issues concerning the level of concentration in farming and the continued ability of family farms to compete in markets dominated by large-scale production units. These concerns are illustrated by USDA statistics that show that the proportion of gross farm income accruing to very large farms increased from about 20 percent in the mid-1970's to nearly 28 percent in the early 1980's, while their share of net farm income rose from about 25 percent to over 50 percent. These statistics also show that the number of very large farms increased from 0.4 percent of all farms in the mid-1970's to 1 percent in the early 1980's. Census data show that very large farms increased their proportion of product sales from 22 percent of the total value of sales for farms selling more than $2,500 in 1974 to 33 percent in 1982. The percentage of farmland in such farms increased from 6 percent to 12 percent.

Although these statistics indicate an increased concentration of both production and resources at the aggregate level, they do not indicate the degree to which the level of concentration may have changed for specific commodities during the period. These statistics are also affected by increases in the general price level. The high inflation rate between 1973 and 1980 may have pushed many farms into higher sales classes, even without real changes in farm size. Because of that, time series comparisons of sales class statistics are faulty. The effect of inflation on farm size is examined in the next section.

Table 19 — Intensity of cropland used

Farm size	Cropland harvested, 1982	Cropland in pasture
	Percent of cropland	
Very large farms	84.8	4.5
Large family	84.0	5.3
Family	78.8	9.1
Small family	65.1	9.1
Rural residence	40.3	46.2
All farm average	73.3	14.6

This section examines changes in the degree of concentration of production and land used for producing specific agricultural commodities. The methodologies employed in the analysis, Gini index-Lorenz curves and distribution curves, are not influenced by changes in the general price level — in contrast to the nominal measures obtained by comparing changes in farm sales class distribution across time periods.

Gini Index-Lorenz Curve Analysis

Lorenz curves are derived by plotting the cumulative percentage of individuals — in this case, farms — against the cumulative percentage of some associated variable — production, or acres, in this analysis. The resulting curve shows how the variable is distributed among all farms. If production were uniformly distributed among farms, the Lorenz curve would be a diagonal line (fig. 6). The degree of concentration of production is measured by the deviation of the curve from the diagonal: the larger the area between the curve and the diagonal the higher the degree of concentration.

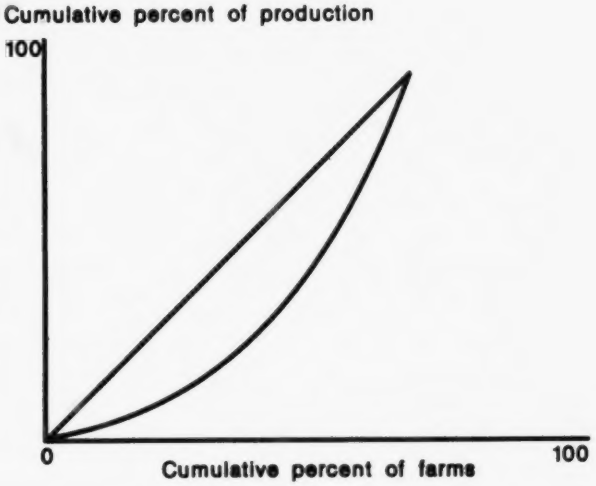
The Gini index is calculated as the ratio of the area between the diagonal and the Lorenz curve to the total area under the

diagonal. The value of the index ranges from zero to one. A value of zero represents a uniform distribution of production across all farms in the above illustration. The closer the value of the index to one, the higher the degree of concentration.

Gini indexes were calculated for selected major commodities for 1974, 1978, and 1982 using Census of Agriculture data (tables 20 and 21). Volume of production was used as the output variable for all crop commodities except orchard crops and vegetables, where value of sales was the output variable. Acres harvested for each crop was the variable used to measure input concentration. For livestock commodities, inventory was used as the concentration variable, except for broilers and hogs where value of sales was used.

To calculate the Gini indexes, the number of farms in each Census sales class producing a specific commodity was calculated as the percentage of all farms producing that commodity. These were then arranged from the smallest to the largest sales class and the percentage of production, acres harvested, or other concentration variables accounted for by each sales class was calculated. These percentages were then used to calculate the Gini indexes. The Gini indexes indicate that there was little change in the degree of concentration in the production of agricultural commodities between 1974 and 1978. Only orchard crops and vegetables, among the crop commodities, had a sizable increase in the Gini indexes for their output measure. The index for concentration of acreage harvested was either stable or declined slightly for all other crops. Among livestock commodities, concentration increased for beef cows and hogs. For other livestock commodities, the degree of concentration was virtually unchanged.

Figure 6
Hypothetical Lorenz Curve



For each crop, we calculated both concentration of output and concentration of harvested acres. In every case, the concentration of output was higher, implying a positive correlation between farm size and land productivity. A number of factors could account for this relationship: larger farms may have higher quality land, use their resources more intensively, use more productive technology, or employ better management and cultural practices.

Distribution Curve Analysis

Distribution curves show how variables are distributed across the farm population. They differ from Gini indexes in that the percentage of a variable accounted for by a given percentage of the population can be read directly from the graph.

Figures 7 through 16 are distribution curves for crops showing the distribution of farms by sales class plotted with the distributions of production and acreage harvested for 1974, 1978, and 1982. The distribution curves for livestock commodities, figures 17 through 23, show the percentage distribution of farms and either inventory or value of sales. Comparison of the charts

Table 20 — Gini indexes of concentration, selected crops

	Production			Acres harvested		
Commodity	1974	1978	1982	1974	1978	1982
Corn	0.5697	0.5406	0.5422	0.5006	0.4898	0.4962
Cotton	.6559	.6073	.6222	.5134	.4650	.4376
Orchards	.7072[1]	.8006[1]	.8088[1]	.6717	.6752	.6743
Peanuts	.5794	.5494	.5437	.4950	.4722	.4669
Rice	*	.4276	.4463	*	.3996	.4152
Sorghum	.4928	.4078	.4359	.3802	.3489	.3687
Soybeans	.4700	.4728	.4688	.4293	.4326	.4314
Tobacco	.5603	.5785	.5803	.5330	.5423	.5424
Vegetables	.7850[1]	.8485[1]	.8431[1]	.7324	.7383	.7339
Wheat	.4916	.4151	.4706	.4320	.3460	.4000

* = Not available.
[1]Value of sales.

Table 21 — Gini indexes of concentration, inventory of selected livestock commodities

Commodity	1974	1978	1982
Beef cows	0.3834	0.4724	0.4793
Broilers	.5331[1]	.5622[1]	.5555[1]
Laying hens	.9119	.9291	.9343
Fed cattle	.8210	.8374	.8374
Hogs	.5051[1]	.5789[1]	.5995[1]
Milk cows	.5167	.5370	.5203
Sheep	.5456	.6015	.5645

[1]Value of sales.

Figure 7

Distribution Curves for Corn, Percent of Farms, Acres Harvested, and Bushels

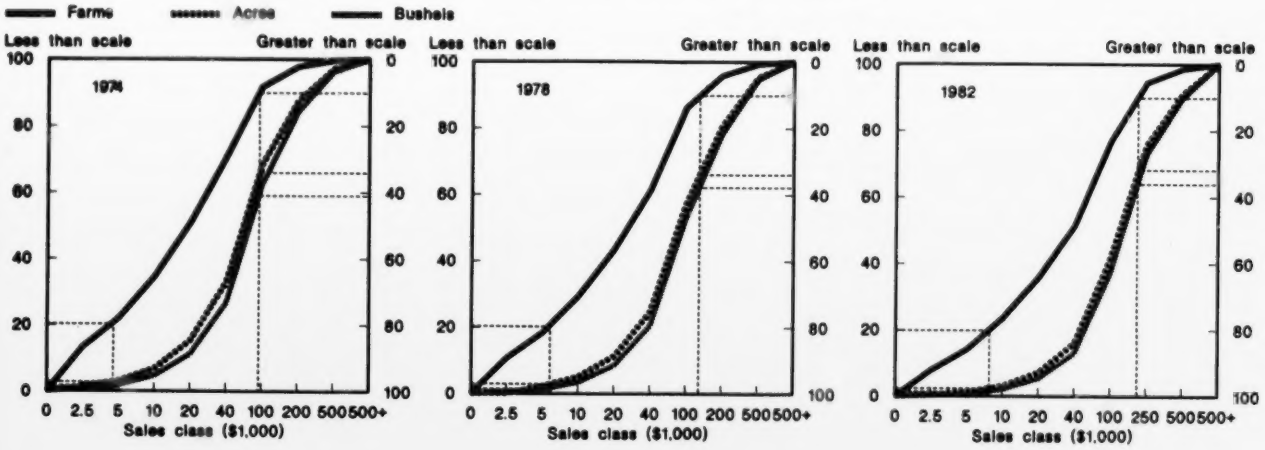


Figure 8

Distribution Curves for Cotton, Percent of Farms, Acres Harvested, and Bales

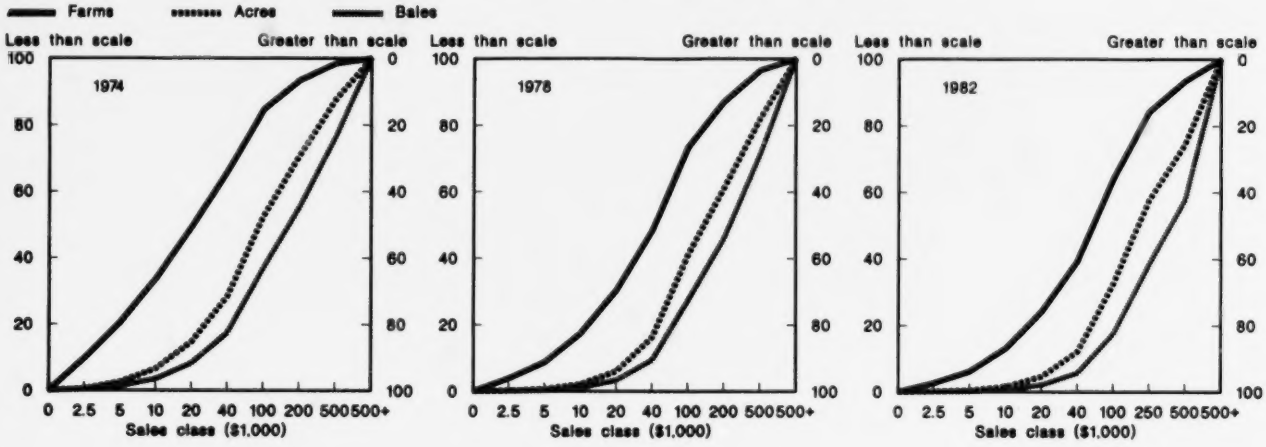


Figure 9

Distribution Curves for Orchards, Percent of Farms and Acres Harvested

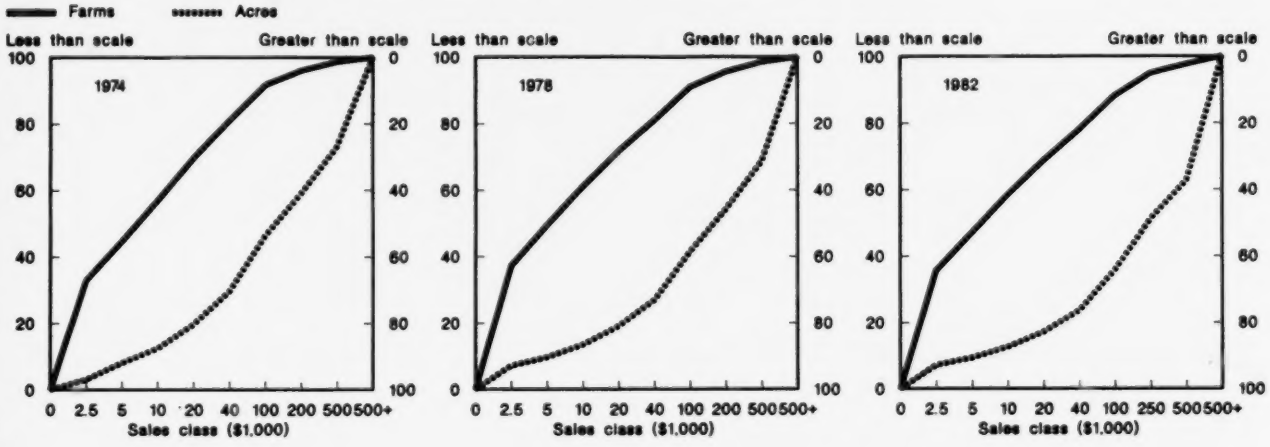


Figure 10

Distribution Curves for Peanuts, Percent of Farms, Acres Harvested, and Pounds

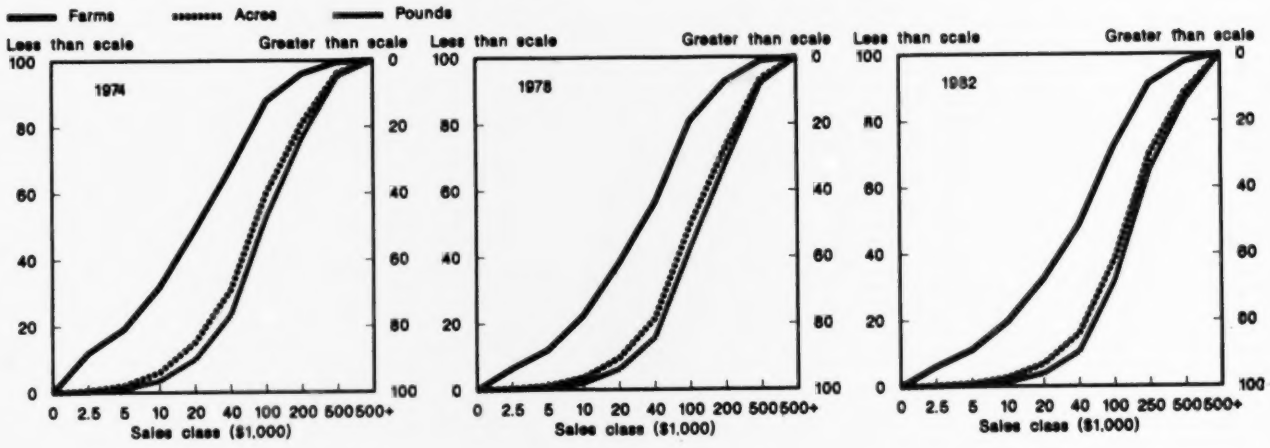


Figure 11

Distribution Curves for Rice, Percent of Farms, Acres Harvested, and Hundredweight

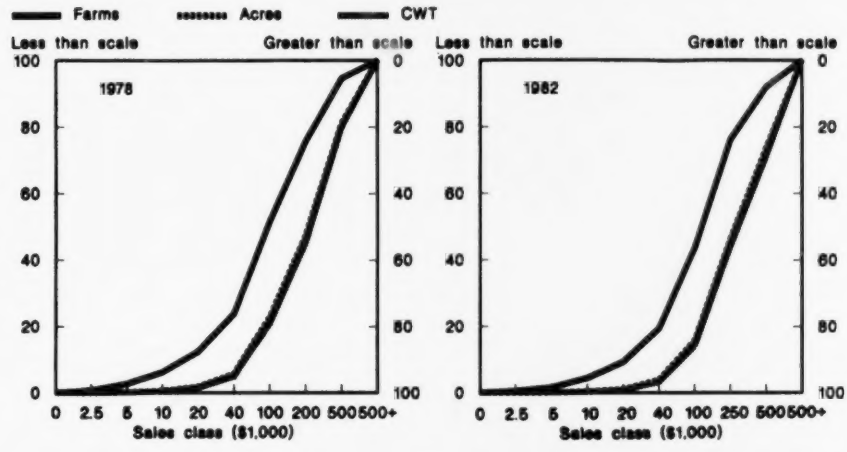


Figure 12

Distribution Curves for Sorghum, Percent of Farms, Acres Harvested, and Bushels

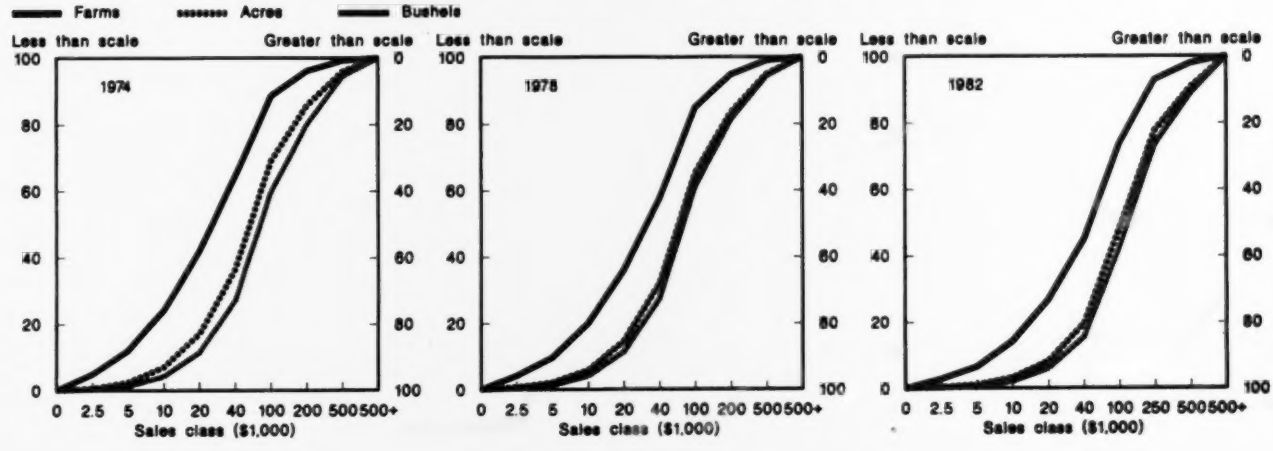


Figure 13

Distribution Curves for Soybeans, Percent of Farms, Acres Harvested, and Bushels

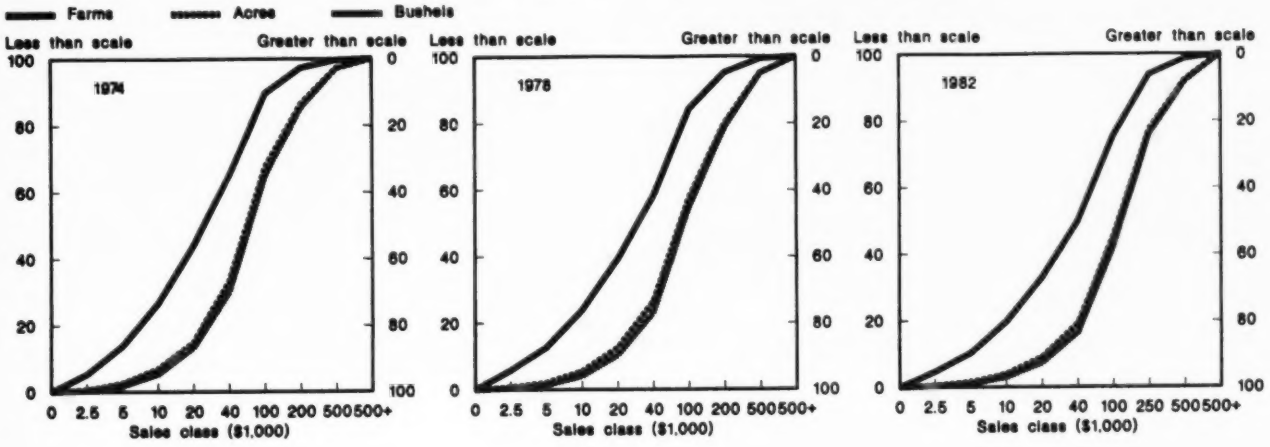


Figure 14

Distribution Curves for Tobacco, Percent of Farms, Acres Harvested, and Pounds

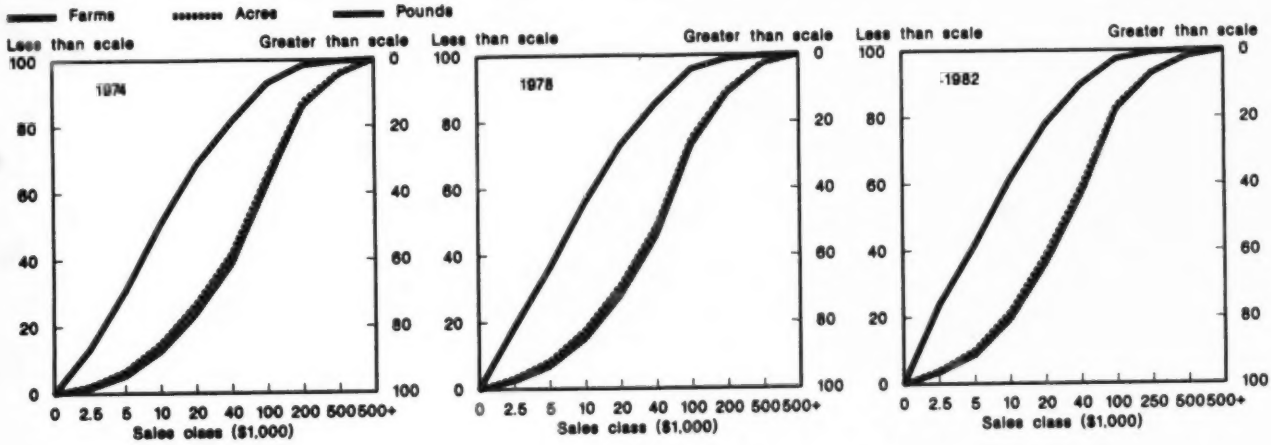


Figure 15

Distribution Curves for Vegetables, Percent of Farms and Acres Harvested

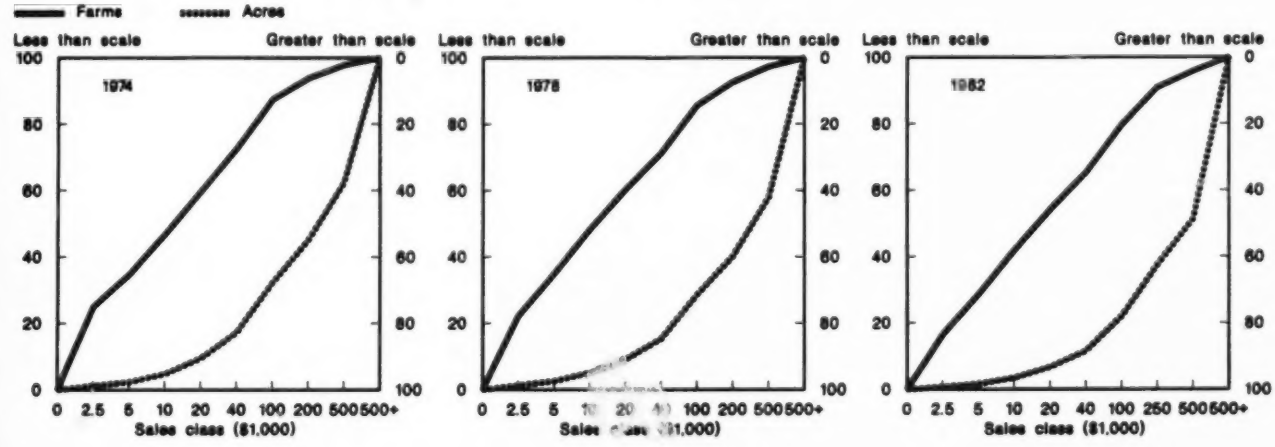


Figure 16

Distribution Curves for Wheat, Percent of Farms, Acres Harvested, and Bushels

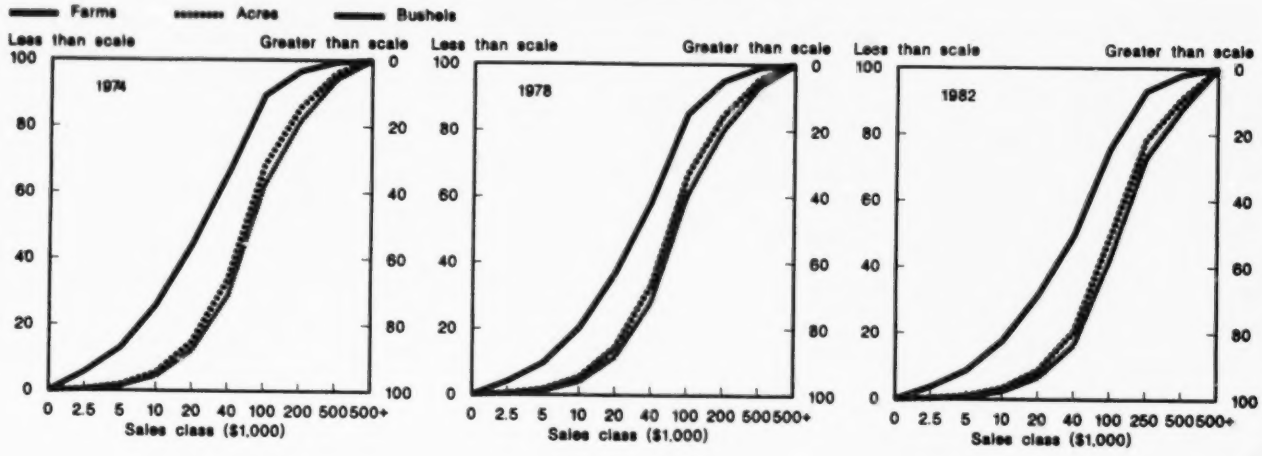


Figure 17

Distribution Curves for Non-Fed Cattle, Percent of Farms and Inventory

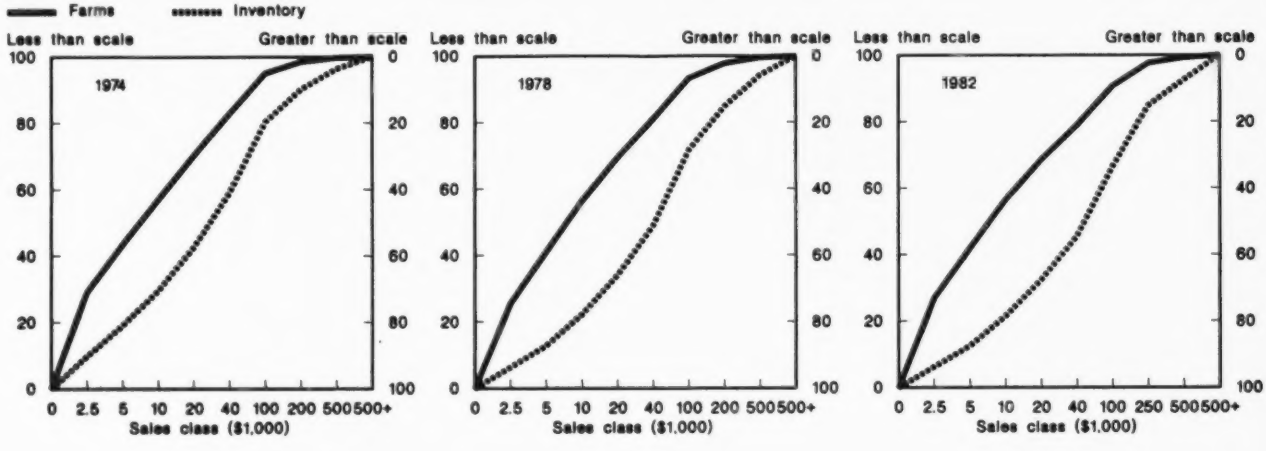


Figure 18

Distribution Curves for Broilers, Percent of Farms and Inventory

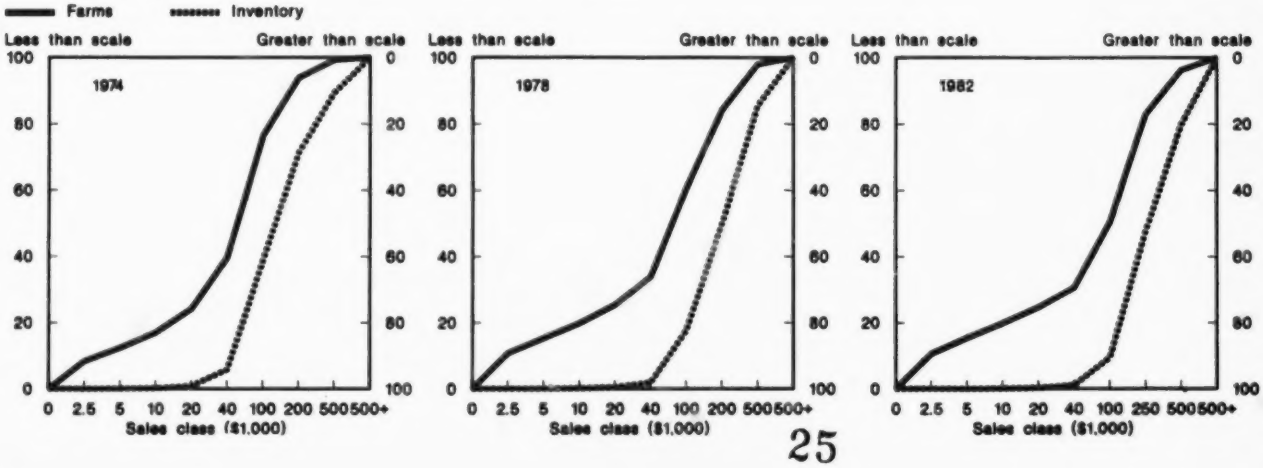


Figure 19

Distribution Curves for Fed Cattle, Percent of Farms and Inventory

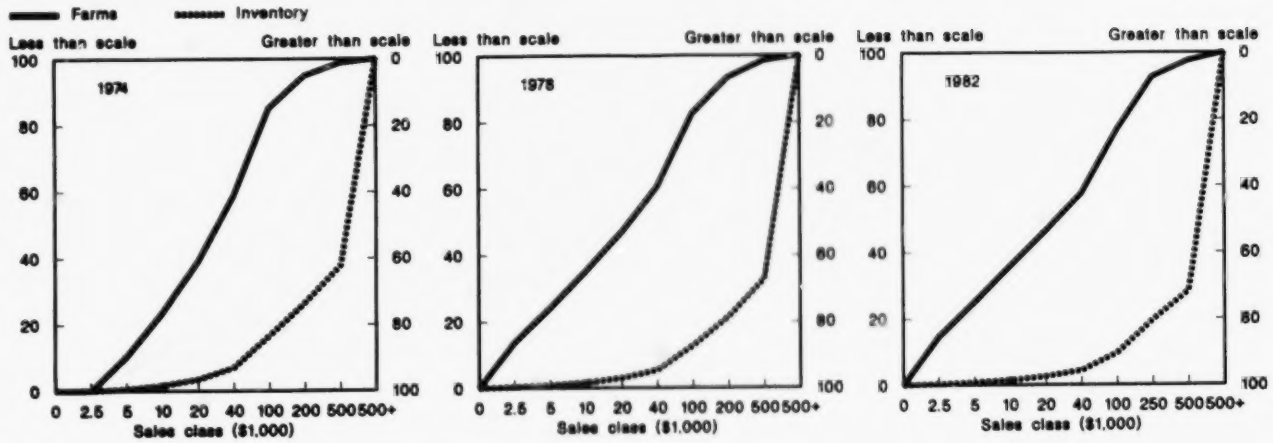


Figure 20

Distribution Curves for Hogs, Percent of Farms and Inventory

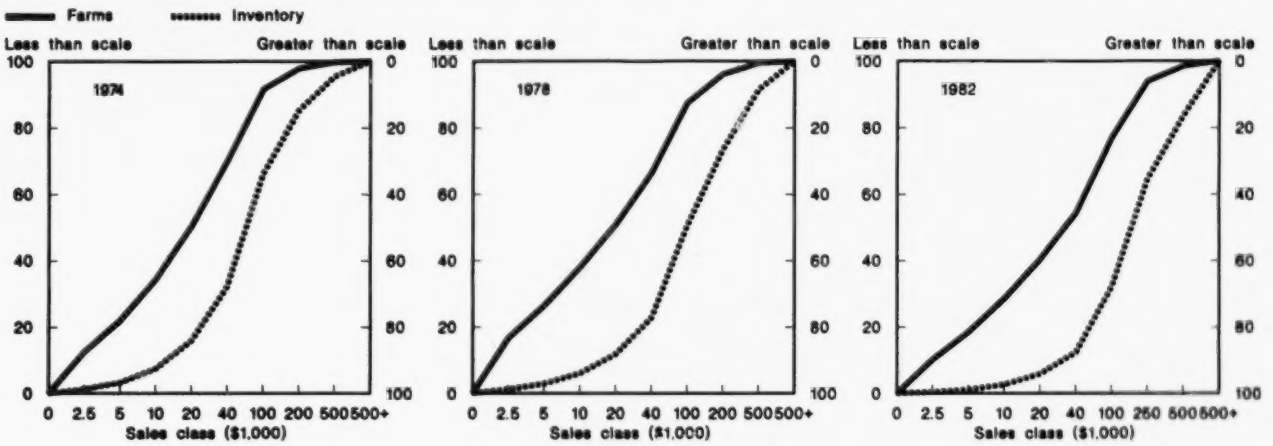
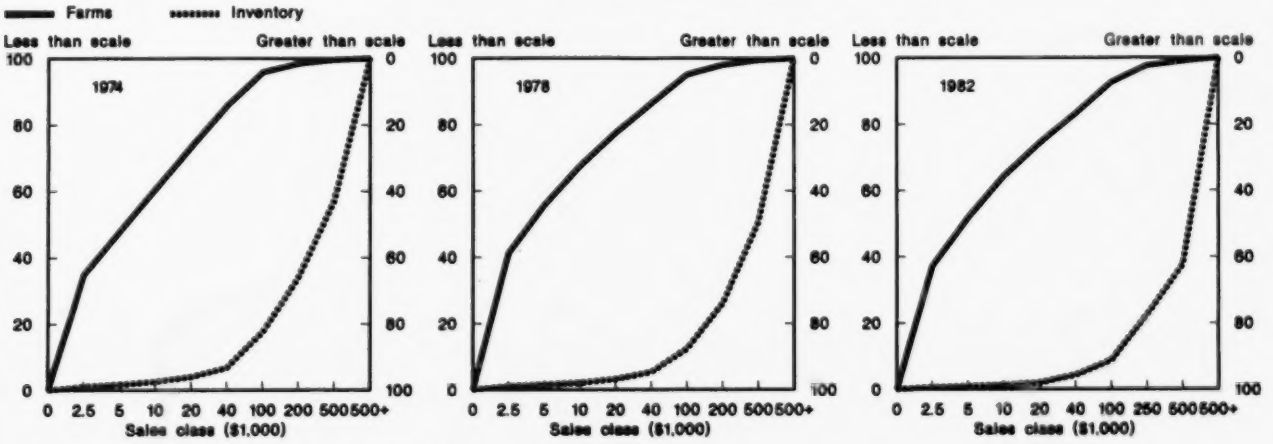


Figure 21

Distribution Curves for Poultry, Percent of Farms and Inventory



for each commodity across years reveals changes in the distribution of production and acres harvested over the time period. The charts may be read either from the "less than" scale on the left to determine the percentage of production and acreage accounted for by a given percentage of the smallest farms, or from the "greater than" scale on the right to determine the production and acreage percentages accounted for by a given percentage of the largest farms.

The top 10 percent of farms producing corn, for example, accounted for about 42 percent of production on 35 percent of harvested acres in 1974 (fig. 7). The bottom 20 percent of corn-producing farms produced about 2 percent of the crop on a little over 2 percent of the harvested acres. In 1982, the top 10 percent of farms producing corn accounted for about 37 percent of the crop on 33 percent of the acreage, while the bottom 20 percent produced about 1 percent of the crop on 2 percent of the harvested acres.

The proportion of production and acreage harvested for most crops accounted for by the top 10 percent of farms changed very little between 1974 and 1982. The same situation was true for the distribution of inventory (or value of sales) for most livestock commodities. Therefore, there were no major shifts of agricultural production and resource use to very large farms. Although there was a substantial increase in the numer of very large farms as measured by changes in census sales class data, both the stability of Gini indexes and the relatively stable percentages of production and acres harvested by the top 10 percent of farms for most major commodities refute the contention that U.S. agriculture is becoming concentrated in the hands of a small number of very large producers.

Figure 30

Distribution Curves for Dairy, Percent of Farms and Inventory

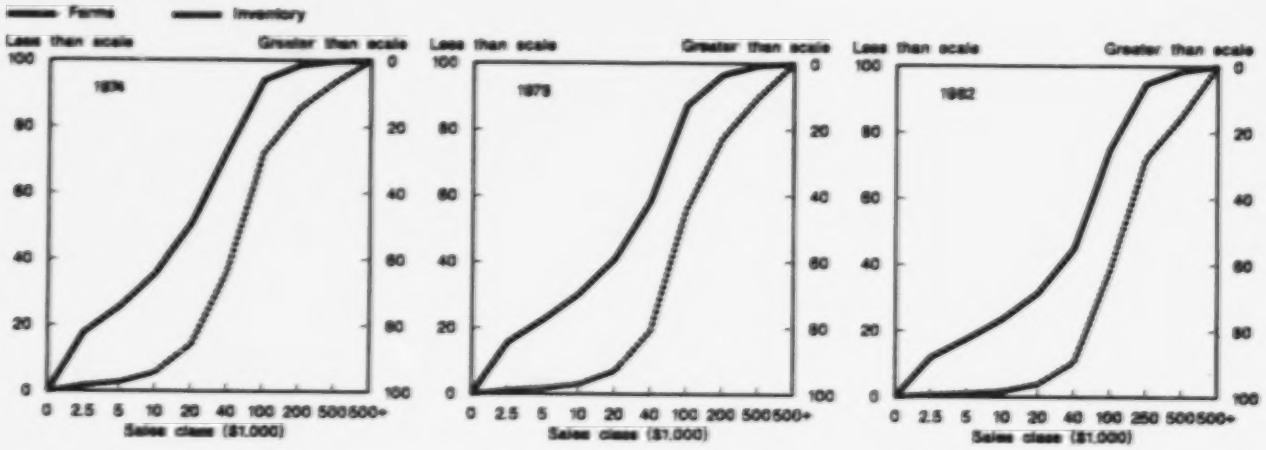
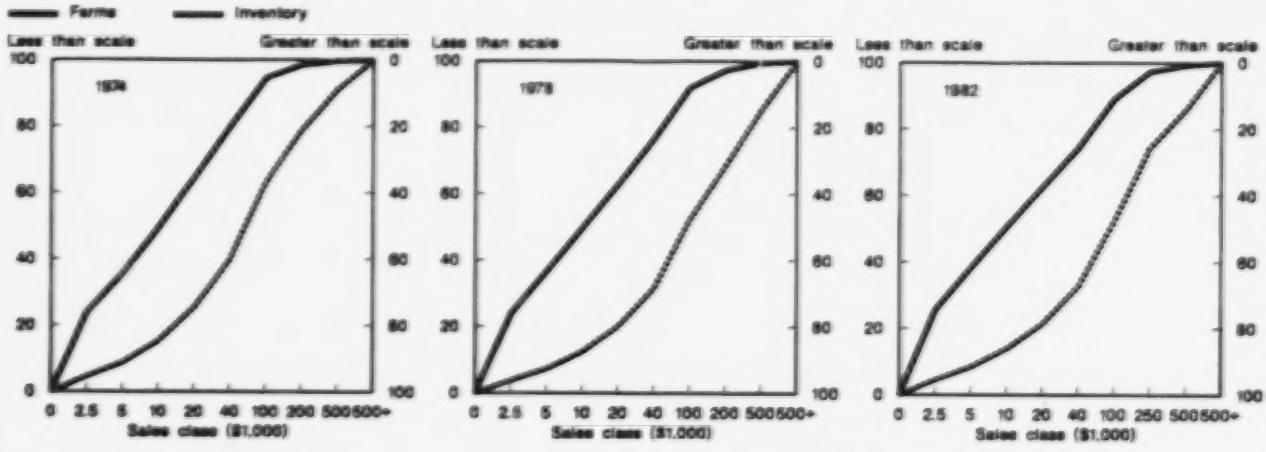


Figure 31

Distribution Curves for Sheep, Percent of Farms and Inventory



Changes Over Time

This section examines changes in the farm sector since 1974. Census of Agriculture data for 1974, 1978, and 1982 are used to trace changes in several of the variables that are important measures of the structure of the farm sector. Structural change variables are examined in both nominal (current dollars) and real (1982 dollars) terms to evaluate the extent to which the changes of the past decade were actual physical changes in the structure of agriculture or illusory changes caused by the high inflation rates from the midseventies through the early eighties.

Nominal Changes

Changes in the published statistics measuring the structure of the farm sector show an increased concentration of both farm assets and production in the larger farm sizes. Although the number of very large and large family farms is still only a small percentage of the total number of farms, their rate of increase between 1974 and 1982 was greater than that of other farm size groups (table 22). The number of very large farms rose by 144 percent during this period; the number of large family farms rose by the same proportion. In contrast, the number of family farms rose by 24 percent, the number of small family farms dropped by 20 percent, and the number of rural residence farms decreased by 9 percent between 1974 and 1982. However, the number of rural residence farms increased by 2 percent from 1978-82.

The proportion of farmland held by the large and very large farms nearly doubled from 1974-82, while the share of land held by family size farms increased slightly (table 23). The amount of land in family size farms declined slightly between 1978 and 1982, although their proportion of farmland remained about the same. The proportion of land held by small family farms and rural residence farms declined from 1974-82. However, from 1978-82 the share of land held by rural residence farms stabilized.

Changes in the proportion of the value of land and buildings held by the various farm size groups paralleled the changes in acreage shares. The proportion of total value held by the two largest farm size groups about doubled from 1974-82 (table 24). Family size farms' share of value of land and buildings increased from 1974-78, but fell between 1978 and 1982. The share of value of land and buildings held by small family farms fell throughout the entire period, and the share held by rural residence farms decreased between 1974 and 1978, then remained about stable from 1978-82.

Nominal changes in the distribution of sales by farm size between 1974 and 1982 showed an increasing degree of concentration in the two largest classes of farms between 1974

Table 22 — Number of farms, by farm size, in nominal dollars

Farm size	1974		1978		1982		Change		
							1974-78	1978-82	1974-82
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Percent*		
Very large	11,412	0.5	17,973	0.8	27,800	1.2	57.5	54.7	143.6
Large family	24,077	1.0	36,202	1.7	58,668	2.6	58.7	53.6	143.7
Family	441,420	19.1	525,586	23.3	548,663	24.5	19.1	4.4	24.3
Small family	631,782	27.3	598,390	26.5	507,832	22.7	-5.3	-19.6	-19.6
Rural residence	1,203,084	52.0	1,075,322	47.7	1,096,337	49.0	-10.6	-8.9	-8.9
All farms[1]	2,311,775	100.0	2,255,473	100.0	2,239,300	100.0	-24.0	-.1	-3.1

[1]Excludes abnormal farms.

Source: Census of Agriculture.

Table 23 — Land in farms, by farm size, in nominal dollars

Farm size	1974		1978		1982		Change		
							1974-78	1978-82	1974-82
	1,000 acres	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*	*Percent*		
Very large	53,844	5.6	84,462	8.8	103,590	11.1	56.9	22.6	92.2
Large family	60,837	6.3	85,738	8.9	106,023	11.4	40.9	23.7	73.3
Family	408,776	42.5	445,123	46.4	435,351	46.7	8.9	-2.2	6.5
Small family	263,114	27.4	213,907	22.3	166,316	17.8	-18.7	-22.2	-36.8
Rural residence	175,394	18.2	129,590	13.5	120,814	13.0	-26.1	-6.8	-31.1
All farms[1]	961,965	100.0	958,819	100.0	932,095	100.0	-.3	-2.8	-3.1

[1]Excludes abnormal farms.

Source: Census of Agriculture.

and 1982, and a decline in the proportion of total sales accounted for by the smaller farm size groups (table 25). The two largest size groups increased their share of nominal sales receipts from about a third to nearly half of total farm commodity sales. The percentage of sales accounted for by the two smallest farm size groups fell by about half from 1974-82.

Real Changes

To evaluate the impact of inflation on the distribution of farms, commodity sales, and farm assets among farm size groups, the farm counts for 1974 and 1978 were redistributed on the basis of 1982 constant prices. The procedure used was to adjust the 1974 and 1978 value of sales for each farm included in the Census of Agriculture for those years to the 1982 price levels. All farms were then counted into 1982 constant dollar size groups as indicated by their adjusted value of sales. The sales value of crop commodities was adjusted by the index of prices received for all crops; and the index of prices received for livestock and livestock products was used to adjust the sales value of livestock commodities.

Constant dollar farm size distribution. The 1974, 1978, and 1982 distributions of farms among 1982 constant dollar size groups are shown in table 26. Compared with nominal farm size group data in table 21, the increase in the number of very large farms and large family farms, while still sizeable, was considerably lower than the nominal increase. At the other end of the farm size scale, the number of rural residence farms

Table 24 — Value of land and buildings, by farm size, in nominal dollars

Farm size	1974		1978		1982		Change 1974-78	Change 1978-82	Change 1974-82
	1,000 dols.	*Percent*	*1,000 dols.*	*Percent*	*1,000 dols.*	*Percent*	*Percent*	*Percent*	*Percent*
Very large	21,203,811	6.3	48,147,629	7.7	92,624,817	12.1	127.1	92.4	336.8
Large family	19,992,108	5.9	51,050,907	8.2	87,023,428	11.4	155.3	70.5	335.3
Family	141,515,834	42.0	292,419,103	46.9	333,320,501	43.7	106.7	14.0	135.5
Small family	83,287,581	24.7	131,045,976	21.0	123,912,450	16.2	57.3	−5.4	48.8
Rural residence	70,858,975	21.0	100,441,727	16.1	126,322,265	16.6	41.7	25.8	78.3
All farms[1]	336,858,309	100.0	623,105,342	100.0	763,203,461	100.0	85.0	22.5	126.6

[1]Excludes abnormal farms.

Source: Census of Agriculture.

Table 25 — Value of sales, by farm size, in nominal dollars

Farm size	1974		1978		1982		Change 1974-78	Change 1978-82	Change 1974-82
	1,000 dols.	*Percent*	*1,000 dols.*	*Percent*	*1,000 dols.*	*Percent*	*Percent*	*Percent*	*Percent*
Very large	18,305,197	22.5	29,558,721	27.8	42,764,189	32.5	61.5	44.7	133.6
Large family	8,103,192	10.0	12,848,612	12.1	19,851,024	15.1	58.6	54.5	145.0
Family	37,362,615	46.0	47,640,955	44.8	54,572,146	41.5	27.5	14.5	46.1
Small family	13,707,035	16.9	12,388,004	11.6	10,836,418	8.2	−9.6	−12.5	−20.9
Rural residence	3,817,219	4.7	3,901,057	3.7	3,565,838	2.7	2.2	−8.6	−6.6
All farms[1]	81,295,258	100.0	106,337,349	100.0	131,589,615	100.0	30.8	23.7	61.9

[1]Excludes abnormal farms.

Source: Census of Agriculture.

Table 26 — Number of farms by constant dollar farm size groups (1982 dollars)

Farm size	1974		1978		1982	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Very large	16,696	0.7	22,674	1.0	27,800	1.2
Large family	35,195	1.5	48,416	2.1	58,668	2.6
Family	526,773	22.8	573,849	25.4	548,663	24.5
Small family	621,076	26.9	598,383	26.5	507,832	22.7
Rural residence	1,112,033	48.1	1,012,151	44.9	1,096,337	49.0
Total[1]	2,311,375	100.0	2,255,493	100.0	2,239,300	100.0

[1]Excludes abnormal farms.

was quite stable between 1974 and 1982. The 1982 constant dollar rural residence size group declined by fewer than 16,000 compared with the nearly 107,000 drop in rural residences based on nominal dollar groupings. The magnitude of the decline in small family farms was about the same for both the nominal farm size group and the 1982 constant dollar farm size group. The number of family size farms, which had a nominal increase of 107,000, was rather stable when expressed in 1982 constant dollars, increasing by less than 22,000 farms between 1974 and 1982.

The percentage changes in the farm size groups between 1974 and 1982 are shown in table 27 for both nominal and constant dollar size groups. These data indicate that inflation between 1974 and 1982 did indeed have a significant impact on the size distribution of farms. Over half of the increase in the number of farms in the two largest farm size groups can be attributed to farms being reclassified because of inflation between 1974 and 1982. About four-fifths of the increase in family size farms is attributable to inflationary commodity price increases. The percentage change in the number of small family farms was about the same whether measured in nominal or 1982 constant dollars, indicating that about as many farms were moved into this size group as moved out because of inflation's effect. About 85 percent of the decline in rural residence farms was inflation induced. When measured in constant dollars, there was only a very slight percentage decline in rural residence farms.

Table 27 — Changes in real and nominal farm numbers by farm size group, 1974-82

Farm size	Nominal change	1982 constant-dollar change
	Percent	
Very large	143.6	66.5
Large family	143.7	66.7
Family	24.3	4.2
Small family	−19.6	−18.2
Rural residence	−8.9	−1.4

Source: Bureau of the Census, U.S. Dept. of Commerce.

Constant dollar asset distribution. The change in the distribution of land in farms and value of land and buildings among the farm size groups between 1974 and 1982 was less pronounced when measured in constant dollars than when measured in nominal dollars (tables 24, 25, and 28). However, the constant dollar data still show a substantial shift of farm assets into the two largest size groups. The decrease in the proportion of assets held by the small family and rural residence groups was flatter when measured in constant dollars than when measured in nominal dollars. Family size farms, which showed a slight increase in their proportion of assets under the nominal dollar measure, actually showed a smaller proportion of both land and land buildings with the constant dollar measure.

Constant dollar distribution of sales. The change in the distribution of value of products sold, like the changes in asset distributions, was flatter between 1974 and 1982 when measured in constant dollars than when measured in nominal dollars (table 25 and 29). The rate of increase in the percentage of total sales accounted for by the two largest size groups was lower when the effects of price inflation were discounted, but there was still a substantial increase in the concentration of sales in these size groups. Similarly, the two smallest size groups saw their share of farm sales decline less with the constant dollar measure than with the nominal dollar measure. There was little difference between the two measures in the rate of decrease of sales for family size farms.

Profiles of Farms by Size

This section describes further the farm sales classes defined earlier. We used five sales classes and compared regions with the national average. The basic structural characteristics addressed are farm numbers and size, asset value, sales, tenure, organization, off-farm work, age, and expenses. We also developed a few operating ratios. Most of the data are from the 1982 Census of Agriculture. Data for off-farm income and total cash expenses are for 1982 and are from *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1983.*

Table 28 — Distribution of land in farms and value of land and buildings, by farm size, 1982 constant dollars

Farm size[1]	Land in farms			Value of land and buildings		
	1974	1978	1982	1974	1978	1982
			Percent			
Very large	7.6	10.2	11.1	7.5	9.0	12.1
Large family	8.0	10.2	11.4	7.3	9.5	11.4
Family	45.6	47.2	46.7	44.5	47.6	43.7
Small family	23.5	20.3	17.8	22.3	19.2	16.2
Rural residence	15.2	12.1	13.0	18.5	14.7	16.6
All farms	100.0	100.0	100.0	100.0	100.0	100.0

[1]Excludes abnormal farms.

Source: Bureau of the Census, U.S. Dept. of Commerce.

Rural Residence Farms

The national composite rural residence farm has 110 acres, with the land and buildings valued at $115,000. This farm has $13,000 worth of machinery, and generates $3,300 of sales and $3,200 of cash operating expenses. It is a sole proprietorship run by a full owner, who is 52 years old and works off the farm 200 or more days per year. Off-farm income data were not available on a State and sales class level; nationally, it was $19,890.

This farm produces $29.84 of farm products per acre and has $29.72 of cash expenses, leaving a return of only 12 cents per acre. That works out to 2.5 cents of sales and cash expenses per dollar of asset value.

Nearly half of all farms in the country are rural residence farms. Most are in the South, but the largest are in the West. Western rural residence farms, however, have a negative return on production, while those in the North Central region have a moderate positive return considerably higher than the national average (table 30).

Table 29 — Distribution of farm sales by constant-dollar size groups (1982 dollars)

Farm size[1]	1974	1978	1982
		Percent	
Very large	25.2	29.7	32.5
Large family	11.5	13.2	15.1
Family	46.0	43.6	41.5
Small family	13.6	10.4	8.2
Rural residence	3.9	3.1	2.7
All farms	100.0	100.0	100.0

[1]Excludes abnormal farms.

Source: Bureau of the Census, U.S. Dept. of Commerce.

Small Family Farms

The composite small family farm has 327 acres, valued at $244,000. It uses $32,000 worth of machinery to produce

Table 30 — Rural residence farms, selected characteristics and operating ratios, 1982

Characteristic	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	115	95	110	179	114
Value of machinery	do.	13	14	12	12	15
Value of commodity sales	do.	3.3	3.7	3.1	2.8	2.9
Total cash expenses	do.	3.2	3.2	3.1	4.0	3.0
Operating ratios:						
Sales per acre	Dollars	29.84	40.50	28.02	19.00	33.07
Expenses per acre	do	29.72	35.22	27.54	26.91	33.82
Returns per acre	do.	.12	5.28	.48	−7.91	−.75
Value of land and buildings per acre	do.	1,055	1,033	982	1,218	1,281
Sales per dollar of assets	Cents	2.5	3.4	2.6	1.5	2.3
Expenses per dollar of assets	do.	2.5	3.0	2.5	2.1	2.3
Expenses per dollar of sales	do.	100	87	98	142	102
Number of farms	Number	1,095,875	320,199	565,458	143,780	66,438
Percent of all farms in region	Percent	49.0	34.3	63.1	51.7	50.4
Average size of farm	Acres	109	92	112	147	89
Tenure of operator:						
Full owner	Percent	76.9	77.7	75.5	79.4	79.3
Part owner	do.	15.0	12.8	16.8	12.9	15.2
Tenant	do.	8.1	9.5	7.7	7.7	5.5
Form of organization:						
Sole proprietorship	do.	92.3	92.1	92.4	91.8	93.8
Partnership	do.	6.5	6.8	6.6	6.3	4.6
Corporation	do.	.7	.6	.5	1.2	1.2
Operators reporting off-farm work:						
None	do.	24.6	24.6	25.4	22.3	23.4
1-99 days	do.	7.6	7.3	7.5	8.4	7.0
100-199 days	do.	10.2	9.9	9.5	12.3	12.4
200 days or more	do.	51.1	52.1	50.4	52.0	52.3
Average age of operator	Years	52.0	50.7	53.1	51.0	51.6

Source: Census of Agriculture, 1982.

$21,000 worth of agricultural products and incurs $13,000 of cash operating expenses. It is a sole proprietorship fully owned by the operator who is 51 years old. Roughly 39 percent of the operators report no off-farm work, although 30 percent report work more than 200 days off the farm, earning income of $15,067.

These farms generate about $64 of sales per acre and $40 of cash expenses leaving a return of $24 per acre. Land and buildings are valued at about $746 per acre, while sales are 7.6 cents per dollar of asset value and cash expenses are 4.7 cents. Roughly 62 cents of every dollar of sales is used for expenses.

About half of the small family farms are in the North Central region; a third are in the South. Small family farms in the West are twice as large as in the other regions, but their per acre land values are much lower. For most of the characteristics studied, the regional rankings from highest to lowest are North Central, South, West, and Northeast. Only the operating ratios deviate from this pattern (table 31).

Family-Size Farms

The composite family-size farm has 793 acres, valued at $607,000. It has $83,000 worth of machinery, produces $99,000 worth of agricultural products, and incurs $58,000 of cash operating expenses. Although the operator is only a part owner, the family-size farm is a sole proprietorship. The operator is about 48 years old; most report no off-farm work, but those who do have off-farm incomes of $10,843.

Each acre on this farm produces $125 of sales from $73 of cash expenses, leaving a return of $52. The land is valued at $765 per acre. In terms of asset value of this farm, there are 14 cents of sales per dollar of assets and 8 cents of cash expenses. Cash expenses claim 60 cents of each dollar of sales.

Roughly a fourth of all the farms in the Nation are in this category. These farms are well distributed across the country with most in the North Central(59 percent) and the fewest in the West (1 percent). Family-size farms in the West are much

Table 31 — Small family farms, selected characteristics and operating ratios, 1982

Characteristic	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	244	214	254	376	190
Value of machinery	do.	32	34	29	32	34
Value of commodity sales	do.	21	22	20	21	21
Total cash expenses	do.	13	13	13	15	13
Operating ratios:						
Sales per acre	Dollars	64.22	83.97	60.06	30.57	139.07
Expenses per acre	do.	39.76	49.62	39.04	21.83	86.09
Returns per acre	do.	24.46	34.35	21.02	8.74	52.98
Value of land and buildings per acre	do.	746	817	763	547	1,258
Sales per dollar of assets	Cents	7.6	8.9	7.1	5.1	9.4
Expenses per dollar of assets	do.	4.7	5.2	4.6	3.7	5.8
Expenses per dollar of sales	do.	62	59	65	71	62
Number of farms	Number	507,767	253,641	175,795	54,681	23,650
Percent of all farms in region	Percent	22.7	27.2	19.6	19.6	17.9
Average size of farm	Acres	327	262	333	687	151
Tenure:						
Full owner	Percent	53.4	52.6	51.6	60.7	58.7
Part owner	do.	31.1	29.7	34.7	26.1	31.0
Tenant	do.	15.5	17.8	13.7	13.2	10.2
Form of organization:						
Sole proprietorship	do.	86.9	87.9	86.0	84.6	88.7
Partnership	do.	11.1	10.6	12.0	11.3	8.4
Corporation	do.	1.5	1.1	1.5	3.2	2.5
Operators reporting off-farm work:						
None	do.	39.0	40.3	36.8	38.2	43.1
1-99 days	do.	11.5	12.1	10.5	12.2	10.6
100-199 days	do.	9.5	9.1	9.5	11.3	10.1
200 days or more	do.	30.2	29.0	32.6	29.4	27.2
Average age of operator	Years	50.8	49.8	51.9	51.9	50.9

Source: Census of Agriculture, 1982.

larger than those in other regions, but the value of their land is considerably lower, their production, expenses, and return are much lower, and thus a larger land base is necessary to achieve the volumes reached in the other regions (table 32).

Large Family Farms

The national composite large family farm has 1,807 acres valued at $1.5 million. It has $165,000 worth of machinery, produces $338,000 of agricultural products, and incurs $205,000 of cash operating expenses. The operator is the sole proprietor, a part owner, 48 years old, with no off-farm work. Operators who report off-farm work earn an average of $13,822.

Sales per acre amount to $187 with cash expenses of $113 for a return of about $74 per acre. Land and buildings on this farm are valued at $821 per acre. The farm generates 21 cents per dollar of asset value, 12 cents of cash expenses per dollar of asset value, and 61 cents of cash expenses per dollar of sales.

Most of the large family farms are in the North Central region. The largest of these farms, in the West, have almost four times as much land and a higher land value per farm, but the per-acre value of the Western farms is considerably lower than those of other regions. The Western farms also have much higher sales per farm and lower sales per acre than farms in other regions, probably due to their much larger acreage (table 33).

Very Large Farms

The average very large farm has 3,727 acres valued at about $900 per acre for a total value of $3.3 million. It has $280,000 worth of machinery, produces $1.5 million in sales, and incurs $1.1 million in cash operating expenses. Generally, it is a sole proprietorship with a part owner, although there are almost as many corporations. The operator is almost 50 years old and most report no off-farm work; those with off-farm jobs have off-farm income of $27,040.

The very large farm produces $413 of sales per acre. Cash expenses run $291 per acre leaving a return of $122 per acre.

Table 32 — Family farms, selected characteristics and operating ratios, 1982

Characteristic	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	607	592	592	899	312
Value of machinery	do.	83	89	73	84	72
Value of commodity sales	do.	99	97	102	104	100
Total cash expenses	do.	58	55	63	59	56
Operating ratios:						
Sales per acre	Dollars	124.84	159.54	124.54	51.06	346.02
Expenses per acre	do.	73.14	90.46	76.92	28.96	193.77
Returns per acre	do.	51.70	69.08	47.62	22.10	152.25
Value of land and buildings per acre	do.	765	974	723	441	1,080
Sales per dollar of assets	Cents	14.3	14.2	15.3	10.6	26.0
Expenses per dollar of assets	do.	8.4	8.1	9.5	6.0	14.6
Expenses per dollar of sales	do.	59	57	62	57	56
Number of farms	Number	548,628	322,894	128,205	60,494	37,035
Percent of all farms in region	Percent	24.5	27.2	14.3	21.7	28.1
Average size of farm	Acres	793	606	819	2,037	289
Tenure:						
Full owner	Percent	33.3	29.4	37.0	43.9	36.9
Part owner	do.	51.5	54.3	48.3	42.5	53.3
Tenant	do.	15.0	16.2	14.1	13.6	9.7
Form of organization:						
Sole proprietorship	do.	81.3	83.3	80.4	72.3	81.3
Partnership	do.	14.0	13.3	14.8	16.1	14.5
Corporation	do.	4.3	3.2	4.3	10.7	3.9
Operators reporting off-farm work:						
None	do.	60.6	62.0	55.3	59.3	69.4
1-99 days	do.	13.8	15.3	11.2	12.8	11.1
100-199 days	do.	4.8	4.4	5.8	5.7	3.7
200 days or more	do.	9.6	7.9	14.6	11.5	6.5
Average age of operator	Years	47.6	46.8	48.4	49.8	47.5

Source: Census of Agriculture, 1982.

The farm generates 43 cents of sales per dollar of asset value, 30 cents of cash expenses per dollar of asset value, and 70 cents of cash expenses per dollar of sales.

Most of the very large farms are in the West. They have the largest acreages and the highest land values, but because they are so large, they have the lowest per acre land values, sales, cash expenses, and returns. An interesting regional deviation in organization is in the Northeast and West where corporations outnumber sole proprietorships (table 34).

All Farms

This profile is given for comparison purposes between sales classes and regions, and the national average. This kind of profile probably has limited use for other comparisons.

The average U.S. farm has 416 acres valued at $820 per acre for a per farm value of $341,000. It uses $42,000 of machinery, produces $59,000 worth of agricultural products, and incurs $38,000 of cash operating expenses. It is a sole proprietorship run by a full-owner operator who is 50 years old. About two-fifths of the operators report no off-farm work, but an almost equal number report more than 200 days of off-farm work with average off-farm income of $16,416.

This farm produces $142 of goods per acre and incurs $91 of cash expenses for a return of $50. It generates about 15 cents of sales per dollar of asset value, almost 10 cents of cash expenses per dollar of asset value, and 64 cents of cash expenses per dollar of sales.

More than half of the farms are in the South; the largest farms are in the West and the smallest are in the Northeast (table 35).

Table 33 — Large family farms, selected characteristics and operating ratios, 1982

Characteristic	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	1,483	1,508	1,337	1,920	719
Value of machinery	do.	165	181	144	165	150
Value of commodity sales	do.	338	335	340	346	336
Total cash expenses	do.	205	196	217	206	205
Operating ratios:						
Sales per acre	Dollars	187.05	255.14	197.33	94.95	622.22
Expenses per acre	do.	113.45	149.28	125.94	56.53	379.63
Returns per acre	do.	73.60	105.86	71.39	38.42	242.59
Value of land and buildings per acre	do.	821	1,149	779	527	1,331
Sales per dollar of assets	Cents	20.5	19.8	23.0	16.6	38.7
Expenses per dollar of assets	do.	12.4	11.6	14.6	9.9	23.6
Expenses per dollar of sales	do.	61	58	64	60	61
Number of farms	Number	58,663	26,841	18,250	10,313	3,259
Percent of all farms in region	Percent	2.6	2.9	2.0	3.7	2.5
Average size of farm	Acres	1,807	1,313	1,723	3,644	540
Tenure of operator:						
Full owner	Percent	30.4	22.0	37.8	38.8	32.2
Part owner	do.	59.5	69.2	52.4	47.9	62.6
Tenant	do.	9.7	8.8	9.7	13.4	5.2
Form of organization:						
Sole proprietorship	do.	60.1	60.5	66.3	50.2	53.6
Partnership	do.	21.6	22.1	19.7	22.2	26.4
Corporation	do.	17.7	17.0	13.3	26.6	19.6
Operators reporting off-farm work:						
None	do.	68.7	71.0	64.3	69.6	70.8
1-99 days	do.	9.9	11.5	8.4	8.6	9.4
100-199 days	do.	2.7	2.0	3.8	2.6	3.0
200 days or more	do.	6.7	4.0	10.6	7.2	5.7
Average age of operator	Years	48.2	47.2	48.2	50.4	49.4

Source: Census of Agriculture, 1982.

Table 34 — Very large farms, selected characteristics and operating ratios, 1982

Characteristics	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	3,332	2,464	3,376	4,439	1,475
Value of machinery	do.	281	264	261	323	238
Value of commodity sales	do.	1,528	1,352	1,502	1,819	1,141
Total cash expenses	do.	1,085	1,068	1,036	1,208	717
Operating ratios:						
Sales per acre	Dollars	412.66	609.28	368.32	339.18	1,634.67
Expenses per acre	do.	291.12	481.30	254.05	225.25	1,027.22
Returns per acre	do.	121.54	127.98	114.27	113.93	607.45
Value of land and buildings per acre	do.	894	1,110	828	828	2,113
Sales per dollar of assets	Cents	42.6	49.6	41.3	38.2	66.6
Expenses per dollar of assets	do.	30.0	39.1	28.5	25.4	41.9
Expenses per dollar of sales	do.	70	79	69	66	63
Number of farms	Number	27,797	8,862	8,417	9,057	1,461
Percent of all farms in region	Percent	1.2	1.0	.9	3.2	1.1
Average size of farm	Acres	3,727	2,219	4,078	5,363	698
Tenure of operator:						
Full owner	Percent	36.0	27.9	40.8	38.8	41.2
Part owner	do.	52.6	64.2	49.2	44.4	51.4
Tenant	do.	11.4	7.9	10.0	16.8	7.4
Form of organization:						
Sole proprietorship	do.	59.7	41.5	44.7	33.7	37.4
Partnership	do.	22.2	21.5	19.7	25.7	19.0
Corporation	do.	37.1	36.4	34.5	39.4	42.8
Operators reporting off-farm work:						
None	do.	71.6	73.0	68.8	72.5	72.5
1-99 days	do.	7.5	8.9	7.3	6.3	7.5
100-199 days	do.	2.7	2.2	3.3	2.6	2.8
20 days or more	do.	7.7	5.2	9.6	8.3	7.1
Average age of operator	Years	49.9	49.0	49.6	51.2	49.8

Source: Census of Agriculture, 1982.

Table 35 — All farms, selected characteristics and operating ratios, 1982

Characteristics	Unit	U.S. average	North Central	South	West	Northeast
Value of land and buildings	$1,000	341	362	263	577	213
Value of machinery	do.	42	53	29	48	40
Value of commodity sales	do.	59	63	42	100	54
Total cash expenses	do.	38	40	28	65	33
Operating ratios:						
Sales per acre	Dollars	141.83	169.35	129.44	103.84	310.34
Expenses per acre	do.	91.34	107.53	85.63	67.50	189.66
Returns per acre	do.	50.49	61.82	42.81	36.34	120.68
Value of land and buildings per acre	do.	820	973	804	599	1,224
Sales per dollar of assets	Cents	15.4	15.2	14.4	16.0	21.3
Expenses per dollar of assets	do.	9.9	9.6	9.6	10.4	13.0
Expenses per dollar of sales	do.	64	63	67	65	61
Number of farms	Number	2,238,730	932,437	896,125	278,325	131,843
Percent of all farms in region	Percent	100.0	29.2	51.6	13.1	6.1
Average size of farm	Acres	416	372	327	963	174
Tenure of operator:						
Full owner	Percent	59.2	52.1	64.2	65.2	62.1
Part owner	do.	29.3	33.9	25.9	24.3	30.3
Tenant	do.	11.6	14.0	9.9	10.6	7.5
Form of organization:						
Sole proprietorship	do.	86.9	86.5	88.4	82.7	87.8
Partnership	do.	10.0	10.7	9.2	10.6	8.7
Corporation	do.	2.7	2.4	1.9	5.9	3.1
Operators reporting off-farm work:						
None	do.	38.4	43.6	33.1	36.8	41.6
1-99 days	do.	10.0	11.5	8.7	10.1	8.9
100-199 days	do.	8.4	7.5	8.8	10.0	9.2
200 days or more	do.	34.6	28.7	40.6	35.7	33.3
Average age of operator	Years	50.5	49.0	53.1	50.9	50.3

Source: Census of Agriculture, 1982.

Appendix: Regional Profiles of Selected Types of Farms

Profiles of several of the major types of crop and livestock farms are presented to characterize the operation of individual farms in each of the selected regions. Profiles were developed for nine types of farms:

- Cash grain
- Tobacco
- Cotton
- Vegetable
- Fruit and nut
- Field crops
- Dairy
- Poultry
- Livestock other than poultry and dairy

For each of these major types of farms, data are presented for the United States and for selected regions. States included in each of the selected regions are indicated in each of the major types of farm profile tables. The farm profile tables show the value of assets, acreages for crop enterprises, income from major commodity sales, total operating expenses, and other farm characteristics such as form of organization and operating ratios. Complete farm profiles for major types of farms and their selected regions are shown in appendix tables 1-10.

Cash Grain Farms

A cash grain farm is defined as a farm whose sales of cash grains constitute more than half of total cash receipts. The number of cash grain farms in the United States was 576,400 in 1982 (app. table 1). Nearly half of the cash grain farms were in the Corn Belt. The Corn Belt, Southern Plains, Northern Plains, and Northwest contain about 430,000 or 74 percent of total U.S. cash grain farms.

Appendix table 1 — Cash grain farms, 1982

Characteristic	Unit	U.S. average	Corn Belt	Southern Plains	Northern Plains	Northwest
Assets:						
Land in farms	Acres/farm	498	325	790	1,012	1,142
Value of land	Dol/acre	872	1,357	407	569	718
Value of land and buildings	Dol/farm	434,582	441,174	321,265	575,776	820,304
Value of machinery and equipment	do.	64,949	62,494	69,182	87,541	101,580
Total assets[1]	Dol/farm	499,531	503,668	390,447	663,317	921,884
Crop enterprises:						
Corn	Acres/farm	77	111	29	83	9
Sorghum	do.	15	2	80	18	0
Wheat	do.	94	26	240	239	335
Barley	do.	10	2	2	41	107
Oats	do.	6	4	3	20	4
Sunflower	do.	6	2	0	45	0
Soybean	do.	88	107	27	33	0
Hay	do.	14	8	19	38	26
Income:						
Total sales	Dol/farm	59,509	60,092	58,272	71,128	98,717
Cash grains	do.	50,206	52,360	48,061	60,058	84,003
All other crops sold	do.	2,146	863	2,783	1,636	9,368
All livestock sold	do.	6,150	6,869	7,427	9,428	5,346
Cattle and calves	do.	3,715	2,998	6,737	7,226	4,768
Hogs and pigs	do.	2,000	3,368	472	1,746	211
Agricultural services	do.	530	494	715	624	880
Total operating expenses	do.	26,407	25,415	28,982	32,538	41,486
Form of organization:						
Individual or family	Percent	85.6	85.2	86.7	85.8	78.5
Partnerships	do.	11.2	11.9	10.1	10.3	11.9
Corporations	do.	2.7	2.4	2.6	3.5	8.7
Operating ratios:						
Operating expenses per acre	Dol/acre	53.00	78.20	36.70	32.20	36.30
Operating expenses per $ of sales	Dollars	.45	.42	.50	.46	.42
Operating expenses per $ of assets	do.	.05	.05	.07	.05	.05
Sales per $ of assets	do.	.12	.12	.15	.11	.11
Sales per $ of operating expenses	do.	2.22	2.36	2.01	2.19	2.38
Sales	Dol/acre	117.00	185.00	74.00	70.00	86.00
Cash returns	do.	64.00	106.80	37.30	37.80	49.70
Number of farms	Number	576,353	263,936	78,500	73,084	13,175

Note: The States in each region are: Corn Belt — Iowa, Illinois, Indiana, Minnesota, Ohio, and Missouri; Southern Plains — Kansas, Oklahoma, Texas, and Colorado; Northern Plains — Montana, N. Dakota, S. Dakota, and Nebraska; and Northwest — Washington, Oregon, and Idaho.
[1]Total assets includes land, buildings, improvements, machinery, and equipment; and excludes inventories of crops and livestock.

Source: *Census of Agriculture, 1982.*

Tobacco Farms

A tobacco farm is defined as a farm where sales of tobacco constitute more than half of total cash receipts. The number of tobacco farms in the United States was 131,300 in 1982 (app. table 2). Over half of the tobacco farms were in the South Central region. The selected regions contain about 120,000 (or 92 percent of total U.S.) tobacco farms. The selected regions are the Southeast (flue-cured tobacco) and South Central (burley tobacco). The States included in these regions are specified in appendix table 2.

Appendix table 2 — Tobacco farms, 1982

Characteristic	Unit	U.S. average	Southeast	South Central
Assets:				
Land in farms	Acres/farm	105	141	89
Value of land	Dol/acre	1,141	1,223	1,059
Value of land and buildings	Dol/farm	120,168	171,896	94,138
Value of machinery and equipment	do.	20,736	32,114	15,137
Total assets[1]	do.	140,904	204,012	109,275
Crop enterprises:				
Tobacco	Acres	6	11	3
Corn	do.	7	16	3
Wheat	do.	3	7	1
Soybeans	do.	8	23	1
Hay	do.	7	3	9
Income:				
Total sales	Dol/farm	21,195	41,290	11,463
Tobacco	do.	16,734	32,980	9,039
All other crops sold	do.	2,694	6,874	656
All livestock sold	do.	1,588	1,360	1,769
Agricultural services	do.	84	153	49
Total operating expenses	do.	7,853	15,724	4,023
Form of organization:				
Individual or family	Percent	86.9	87.4	86.5
Partnership	do.	12.2	11.4	12.9
Corporation	do.	.5	.8	.3
Operating ratios:				
Operating expenses	Dol/acre	74.50	111.90	45.20
Operating expenses per $ of sales	Dollars	.37	.38	.35
Operating expenses per $ of assets	do.	.06	.08	.04
Sales per $ of assets	do.	.15	.20	.10
Sales per $ of operating expenses	do.	2.70	2.63	2.85
Sales	Dol/acre	201.20	293.80	128.90
Cash returns	do.	126.70	181.90	83.70
Number of farms	Number	131,281	41,364	79,110

Note: The States in each region are: Southeast — Georgia, North Carolina, South Carolina, and Virginia; South Central — Tennessee and Kentucky.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Cotton Farms

A cotton farm is defined as a farm where sales of cotton constitute more than half of total cash receipts. The number of cotton farms in the United States was 21,000 in 1982 (app. table 3). Nearly half of the cotton farms were in the High Plains Region. The selected regions contain about 18,000 (85 percent of total U.S.) cotton farms. The selected regions are the Delta, High Plains, and Western States. The States included in these regions are specified in appendix table 3.

Appendix table 3 — Cotton farms, 1982

Characteristic	Unit	U.S. average	Delta	High Plains	Western States
Assets:					
Land in farms	Acres/farm	811	738	860	1,051
Value of land	Dol/acre	992	753	641	2,457
Value of land and buildings	Dol/farm	804,017	555,756	550,722	2,582,247
Value of machinery and equipment	do.	101,421	112,730	79,187	185,571
Total assets[1]	do.	905,438	668,486	629,909	2,767,818
Crop enterprises:					
Cotton	Acres	331	281	353	497
Sorghum	do.	31	6	60	2
Wheat	do.	46	40	35	103
Soybeans	do.	73	206	3	0
Hay	do.	13	7	6	56
Income:					
Total sales	Dol/farm	149,257	159,644	66,157	485,244
Cotton	do.	108,953	122,637	52,493	358,303
All other crops sold	do.	32,399	33,988	11,105	121,049
All livestock sold	do.	2,876	2,974	2,558	2,746
Agricultural services	do.	1,415	848	741	5,914
Total operating expenses	do.	74,339	77,196	36,759	241,019
Form of organization:					
Individual or family	Percent	81.5	79.7	86.9	63.2
Partnership	do.	12.5	12.9	9.3	21.8
Corporation	do.	5.3	6.8	3.1	14.2
Operating ratios:					
Operating expenses	Dol/acre	91.70	104.70	42.80	229.30
Operating expenses per $ of sales	Dollars	.50	.48	.56	.50
Operating expenses per $ of assets	do.	.08	.12	.06	.09
Sales per $ of assets	do.	.16	.24	.11	.18
Sales per $ of operating expenses	do.	2.01	2.07	1.80	2.01
Sales	Dol/acre	184.10	216.40	77.00	461.70
Cash returns	do.	92.40	111.70	34.20	232.40
Number of farms	Number	21,041	5,469	9,859	2,616

Note: The States in each region are: Delta — Louisiana, Arkansas, and Mississippi; High Plains — Texas and Oklahoma; and Western States — California and Arizona.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Vegetable Farms

A vegetable farm is defined as a farm where sales of vegetables constitute more than half of total cash receipts. The number of vegetable farms in the United States was 30,700 in 1982 (app. table 4). The selected regions contain about 15,000 (48 percent of total U.S.) vegetable farms. The selected regions are the Southern Coast, Pacific Coast, Lake States, and Northeast Coast. The States included in these regions are specified in appendix table 4.

Appendix table 4 — Vegetable farms, 1982

Characteristic	Unit	U.S. average	Southern Coast	Pacific Coast	Lake States	Northeast Coast
Assets:						
Land in farms	Acres	168	276	427	147	127
Value of land	Dol/acre	2,586	2,400	3,934	1,541	1,833
Value of land and buildings	Dol/farm	434,790	662,160	1,681,429	227,015	232,812
Value of machinery and equipment	do.	47,642	59,623	128,879	42,521	46,692
Total assets[1]	do.	482,432	721,803	1,810,308	269,536	279,504
Crop enterprises:						
Vegetables	Acres/farm	71	112	231	71	57
Corn	do.	8	8	11	13	11
Wheat	do.	8	3	37	4	5
Soybeans	do.	6	2	0	10	10
Hay	do.	6	4	22	4	3
Income:						
Total sales	Dol/farm	127,890	223,075	549,991	51,931	69,391
Vegetables	do.	109,830	205,188	471,578	42,535	60,284
All other crops sold	do.	15,358	15,460	67,612	8,400	8,311
All other livestock sold	do.	1,161	2,427	1,795	996	796
Agricultural services	do.	586	275	2,843	460	313
Total operating expenses	do.	56,479	94,651	240,461	25,799	31,667
Form of organization:						
Individual or family	Percent	85.2	84.9	65.3	87.1	84.1
Partnership	do.	9.5	9.0	19.0	8.9	10.1
Corporation	do.	5.0	5.7	15.0	3.8	5.4
Operating ratios:						
Operating expenses	Dol/acre	335.90	343.10	562.60	175.10	250.40
Operating expenses per $ of sales	Dollars	.44	.42	.44	.50	.45
Operating expenses per $ of assets	do.	.12	.13	.13	.10	.11
Sales per $ of assets	do.	.27	.31	.30	.19	.25
Sales per $ of operating expenses	do.	2.26	2.36	2.29	2.01	2.22
Sales	Dol/acre	761.00	809.00	1,287.00	353.00	555.00
Cash returns	do.	425.10	465.90	724.40	177.90	304.60
Number of farms	Number	30,666	3,662	3,348	3,934	3,790

Note: The States in each region are: Southern Coast — Georgia, North Carolina, South Carolina, and Virginia; Pacific Coast — California and Oregon; Lake States — Minnesota, Wisconsin, and Michigan; Northeast Coast — Maryland, Delaware, New Jersey, and New York.
[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Fruit and Nut Farms

A fruit and nut farm is defined as a farm where sales of fruit, nuts, and berries constitute more than half of total cash receipts. The number of fruit and nut farms in the United States was 84,300 in 1982 (app. table 5), nearly half in the Pacific Coast region. The selected regions contain about 69,000 (82 percent of total U.S.) fruit and nut farms. The selected regions are Florida-Texas, Southeast, Pacific Coast, and Northeast. The States in each region are specified in appendix table 5.

Appendix table 5 — Fruit and nut farms, 1982

Characteristic	Unit	U.S. average	Florida-Texas	South-east	Pacific Coast	North-east
Assets:						
Land in farms	Acres/farm	107	177	233	83	109
Value of land	Dol/acre	3,948	3,137	1,213	6,106	1,726
Value of land and buildings	Dol/farm	422,543	554,079	282,324	507,869	188,654
Value of machinery and equipment	do.	33,281	28,936	34,109	35,500	39,134
Total assets[1]	do.	455,824	583,015	316,433	543,369	227,788
Crop enterprise:						
Orchards	Acres	48	80	62	50	40
Income:						
Total sales	Dol/farm	68,593	83,505	51,084	79,521	46,356
Fruit, nut, and berries	do.	65,317	81,285	43,289	75,622	43,129
All other crops sold	do.	2,660	891	6,426	3,495	2,428
All other livestock sold	do.	594	1,321	942	404	799
Agricultural services	do.	514	755	236	611	436
Total operating expenses	do.	37,422	41,465	26,756	44,990	26,108
Form of organization:						
Individual or family	Percent	80.9	76.4	85.4	79.4	84.9
Partnership	do.	12.1	11.8	9.7	14.0	9.5
Corporation	do.	6.1	10.3	4.2	5.6	5.2
Operating ratios:						
Operating expenses	Dol/acre	350.00	235.00	115.00	541.00	239.00
Operating expenses per $ of sales	Dollars	.55	.50	.52	.57	.56
Operating expenses per $ of assets	do.	.08	.07	.08	.08	.11
Sales per $ of assets	do.	.15	.14	.16	.15	.20
Sales per $ of operating expenses	do.	1.83	2.01	1.91	1.77	1.78
Sales	Dol/acre	641.00	473.00	219.00	956.00	424.00
Cash returns	do.	291.00	238.00	104.00	415.00	185.00
Number of farms	Number	84,300	12,603	2,082	44,878	9,240

Note: The States in each region are: Florida and Texas; Southeast — Georgia and S. Carolina; Pacific Coast — Washington, Oregon, and California; Northeast — New York, Michigan, Virginia, Pennsylvania, and Maryland.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Field Crop Farms

A field crop farm is defined as a farm where sales of field crops (other than cash grains) constitute more than half of total cash receipts. The number of field crop farms in the United States was 100,600 in 1982 (app. table 6). The selected regions contain about 32,000 (32 percent of total U.S.) field crop farms.

The selected regions are the Red River Valley, Northwest, Southeast, and Southern Plains. The States in these regions are specified in appendix table 6.

Appendix table 6 — Field crop farms, 1982

Characteristic	Unit	U.S. average	Red River Valley	North-west	South-east	Southern Plains
Assets:						
Land in farms	Acres/farm	272	361	400	335	272
Value of land	Dol/acre	1,127	886	1,391	962	942
Value of land and buildings	Dol/farm	306,390	320,284	556,977	322,280	256,603
Value of machinery and equipment	do.	37,215	19,959	80,669	43,949	31,430
Total assets[1]	do.	343,605	340,243	637,646	366,229	287,646
Crop enterprises:						
Corn	Acres/farm	7	8	6	28	1
Sorghum	do.	1	0	0	3	6
Wheat	do.	14	69	48	22	10
Barley	do.	6	22	26	0	0
Soybeans	do.	7	10	0	45	1
Irish potatoes	do.	10	28	37	1	0
Sugarbeets	do.	4	32	10	0	0
Peanuts	do.	7	0	0	41	19
Field seed & grass seed	do.	3	0	31	0	0
Hay	do.	46	14	61	14	52
Income:						
Total sales	Dol/farm	45,122	57,200	114,381	56,634	22,027
Field crops	do.	26,233	34,481	64,149	36,053	11,075
All other crops sold	do.	17,249	21,793	46,894	17,303	8,606
Grains	do.	6,226	15,703	21,595	12,435	1,724
Hay	do.	9,621	5,769	22,615	1,786	5,939
All other livestock sold	do.	1,749	578	3,338	3,241	2,340
Cattle and calves	do.	1,325	289	2,697	2,041	2,189
Agricultural services	do.	395	183	1,043	332	386
Total operating expenses	do.	19,965	14,282	49,258	25,071	12,621
Form of organization:						
Individual or family	Percent	88.1	87.9	82.5	87.4	89.8
Partnership	do.	8.3	8.3	10.3	9.8	8.3
Corporation	do.	2.9	3.2	6.6	2.2	1.3
Operating ratios:						
Operating expenses	Dol/acre	73.40	39.60	123.00	74.80	46.40
Operating expenses per $ of sales	Dollars	.44	.25	.43	.44	.57
Operating expenses per $ of assets	do.	.06	.04	.08	.07	.04
Sales per $ of assets	do.	.13	.17	.18	.15	.08
Sales per $ of operating expenses	do.	2.26	4.01	2.32	2.26	1.75
Sales	Dol/acre	166.00	159.00	286.00	169.01	81.00
Cash returns	do.	92.60	119.40	163.00	94.20	34.60
Number of farms	Number	100,611	5,458	9,866	6,042	10,834

Note: The States in each region are: Red River Valley — N. Dakota and Minnesota; Northwest — Washington, Oregon, and Idaho; Southeast — Georgia and North Carolina; and Southern Plains — Texas and Oklahoma.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Dairy Farms

A dairy farm is defined as a farm where sales of dairy products constitute more than half of total cash receipts. The number of dairy farms in the United States was 164,500 in 1982 (app. table 7). Nearly 40 percent of the dairy farms were in the Lake States. The selected regions contain about 100,000 (60 percent of total U.S.) dairy farms. The selected regions are the Northeast, Lake States, and Southwest. The States included in these regions are specified in appendix table 7.

Appendix table 7 — Dairy farms, 1982

Characteristic	Unit	U.S. average	North-east	Lake States	South-west
Assets:					
Land in farms	Acres/farm	302	305	270	345
Value of land	Dol/acre	1,093	920	1,042	3,157
Value of land and buildings	Dol/farm	329,861	280,634	281,142	1,089,917
Value of machinery and equipment	do.	71,328	72,654	74,218	105,368
Total assets[1]	do.	401,189	353,288	355,360	1,195,285
Crop enterprises:					
Corn-grain	Acres/farm	35	25	46	4
Corn-silage	do.	25	32	23	44
Wheat	do.	7	3	3	5
Barley	do.	2	1	1	6
Oats	do.	12	9	18	0
Soybeans	do.	6	1	4	0
Hay	do.	78	98	81	76
Dairy cow inventory	No./farm	59	54	43	350
Income:					
Total sales	Dol/farm	110,222	97,949	80,463	732,670
Dairy	do.	90,126	86,627	65,642	659,746
All other crops sold	do.	6,414	3,498	5,729	16,454
Grains	do.	4,859	2,392	5,000	2,512
All livestock sold	do.	10,936	7,824	9,048	56,401
Cattle and calves	do.	9,721	7,307	7,814	55,874
Agricultural services	do.	175	363	61	702
Total operating expenses	do.	76,211	66,169	43,764	643,108
Form of organization:					
Individual or family	Percent	81.7	83.5	83.8	66.4
Partnership	do.	15.4	14.6	14.1	25.0
Corporation	do.	2.6	1.7	1.9	8.0
Operating ratios:					
Operating expenses	Dol/acre	253.00	217.00	162.00	1,863.00
Operating expenses per $ of sales	Dollars	.69	.68	.54	.88
Operating expenses per $ of assets	do.	.19	.19	.12	.54
Sales per $ of assets	do.	.27	.28	.23	.61
Sales per $ of operating expenses	do.	1.45	1.48	1.84	1.14
Sales	Dol/acre	365.00	321.00	298.00	2,122.00
Cash returns	do.	112.00	104.00	136.00	259.00
Cash returns	Dol/head	573.63	586.66	845.35	255.73
Investment costs	Do.	6,766.40	6,521.54	8,185.62	3,412.97
Number of farms	Number	164,454	31,166	65,345	3,025

Note: The States in each region are: Northeast — New York, Pennsylvania, and Vermont; Lake States — Minnesota, Wisconsin, and Michigan; Southwest — California, Arizona, and New Mexico.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Poultry Farms

A poultry farm is defined as a farm where sales of poultry and poultry products constitute more than half of cash receipts. The number of poultry farms in the United States was 41,900 in 1982 (app. table 8). Nearly half of the poultry farms were in the Southeast. The selected regions contain about 28,300 (67.5 percent of total U.S.) poultry farms. The selected regions are the Southeast, Delmarva, East North Central, and West North Central. The States included in these regions are specified in appendix table 8.

Appendix table 8 — Poultry farms, 1982

Characteristic	Unit	U.S. average	South-east	Delmarva	East North Central	West North Central
Assets:						
Land in farms	Acres/farm	117	116	113	101	141
Value of land	Dol/acre	1,742	1,344	2,178	2,659	1,786
Value of land and buildings	Dol/farm	204,156	155,870	246,056	268,978	252,407
Value of machinery and equipment	do.	38,887	30,008	48,702	54,439	58,908
Total assets[1]	do.	243,043	185,878	294,758	323,417	311,315
Crop enterprises:						
Corn	Acres/farm	10	3	18	34	37
Wheat	do.	4	3	7	5	4
Soybeans	do.	9	8	32	10	13
Hay	do.	10	13	5	8	11
Income:						
Total sales	Dol/farm	240,403	216,915	259,082	273,855	296,332
Grains	do.	3,655	1,908	9,212	8,716	10,191
Poultry and products	do.	228,416	208,190	241,197	248,516	275,382
All other crops sold	do.	5,336	3,338	11,723	10,096	10,760
All other livestock sold	do.	6,046	5,218	6,000	15,221	8,176
Agricultural services	do.	191	143	313	294	245
Total operating expenses	do.	303,163	265,288	333,472	347,163	380,601
Form of organization:						
Individual or family	Percent	87.0	89.8	87.0	84.0	78.2
Partnership	do.	7.5	7.0	7.8	8.2	8.7
Corporation	do.	5.2	3.0	5.0	7.6	12.8
Operating ratios:						
Operating expenses	Dol/acre	2,586.00	2,287.00	2,952.00	2,432.00	2,693.00
Operating expense per $ of sales	Dollars	1.26	1.22	1.29	1.27	1.28
Operating expenses per $ of assets	do.	1.25	1.43	1.13	1.07	1.22
Sales per $ of assets	do.	.99	1.17	.88	.85	.95
Sales per $ of operating expenses	do.	.79	.82	.78	.79	.78
Sales	Dol/acre	2,051.00	1,870.00	2,293.00	2,707.00	2,097.00
Cash returns	do.	-535.00	-417.00	-659.00	-725.00	-596.00
Number of farms	Number	41,928	18,645	3,583	3,677	2,387

Note: The States in each region are: Southeast — North Carolina, Georgia, Alabama, Mississippi, and Arkansas; Delmarva — Delaware, Maryland, and Virginia; East North Central — Indiana, Ohio, and Pennsylvania; West North Central — Minnesota, Iowa, and Wisconsin.
[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Other Livestock Farms [1]

Other livestock farms are defined as a farm where sales of cattle and calves, hogs and pigs, and sheep, lamb, and wool constitute more than half of total cash receipts. The number of other livestock farms in the United States was 905,800 in 1982 (app. table 9). Other livestock farms are distributed widely among regions. The selected regions contain about 406,000 (45 percent of total U.S.) other livestock farms. The selected regions are the Corn Belt and Southern Plains. The States in these regions are specified in appendix table 9.

[1]These are livestock farms other than dairy or poultry, which are farms producing cattle and calves, hogs and pigs, and sheep and lambs.

Appendix table 9 — Livestock farms (other than poultry or dairy), 1982

Characteristic	Unit	U.S. average	Corn Belt	Southern Plains
Assets:				
Land in farms	Acres	524	295	726
Value of land	Dol/acre	513	1,014	463
Value of land and buildings	Dol/farm	268,792	299,082	336,013
Value of machinery and equipment	do.	26,032	40,256	22,975
Total assets[1]	do.	294,824	339,338	358,988
Crop enterprises:				
Corn	Acres/farm	16	54	2
Sorghum	do.	2	2	6
Wheat	do.	11	6	24
Soybeans	do.	8	25	2
Hay	do.	28	27	22
Cattle and calves inventory	No./farm	73	69	98
Hogs and pigs inventory	do.	48	142	12
Sheep and lamb inventory	do.	11	5	15
Income:				
Total sales	Dol/farm	43,990	73,753	56,427
Cattle and calves sold	do.	29,350	35,363	49,564
Fed cattle	do.	17,575	27,263	32,430
Hogs and pigs sold	do.	8,919	26,252	2,164
Sheep, lambs and wool sold	do.	574	288	848
All crops sold	do.	4,661	10,981	3,527
All other livestock sold	do.	374	819	93
Agricultural services	do.	156	271	168
Total operating expenses	do.	34,503	53,915	48,006
Form of organization:				
Individual or family	Percent	89.5	87.2	89.6
Partnership	do.	8.2	10.0	8.3
Corporation	do.	1.8	2.5	1.5
Operating ratios:				
Operating expenses	Dol/acre	65.80	182.70	66.20
Operating expenses per $ of sales	Dollars	.78	.73	.85
Operating expenses per $ of assets	do.	.12	.16	.13
Sales per $ of assets	do.	.15	.22	.16
Sales per $ of operating expenses	do.	1.27	1.37	1.18
Sales	Dol/acre	83.90	249.90	77.80
Cash returns	do.	18.10	67.20	11.60
Cash returns	Dol/head	71.22	92.01	67.71
Investment costs	do.	2,234.79	1,573.90	2,886.41
Number of farms	Number	905,815	195,757	210,485

Note: The States in each region are: Corn Belt — Iowa, Minnesota, Illinois, Indiana, Ohio, Missouri, and Nebraska; Southern Plains — Texas, Oklahoma, Colorado, and Kansas.

[1]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Summary Comparison of Nine Farm Types

Previous tabulations centered on describing a typical farm in each of several regions for each of nine commodities. This section presents a summary table showing the U.S. average for all nine types of farms. Nine types of commodities represented 2,056,449 U.S. farms (app. table 10). Farms not included in this study were horticulture, general crop, general livestock, and animal specialty farms. The table gives a cross-commodity comparison of the average U.S. farm for each commodity. These data show assets, crop enterprises, sales, expenses, form of organization, and operating ratios. The focus here is on the operating ratios. The commodity with the lowest cash operating expenses per dollar of sales is tobacco ($0.37), while the commodity with the highest ratio is poultry ($1.26).

The ratio of cash operating expenses per dollar of sales tended to be higher for livestock farms which ranged from $0.69-$1.26. The crop commodities (cash grains, cotton, vegetable, fruit and nuts, and field crops) all have ratios of cash operating expenses per dollar of sales that range from $0.44-$0.55. Operating expenses per dollar of assets were similar for cash grains, tobacco, and field crops, where the ratio ranged from $0.05-$0.06; cotton and fruit and nut farms were the same with a ratio of $0.08; vegetable and livestock other than poultry and dairy (LOPD) have a ratio of $0.12. This ratio was higher for dairy ($0.19) and much higher for poultry ($1.25). Note that the poultry ratios of cash operating expenses per dollar of sale and cash operating expenses per dollar of asset were the same. A wide difference between these ratios existed for all other commodities in this study. A third ratio, sales per dollar of assets, for cash grains, tobacco, cotton, orchards, field crops, and LOPD, were within the range of $0.12-$0.16. The ratio for dairy ($0.27) was nearly double that for most of the other commodities, and for poultry was over seven times the ratio for most crops. Poultry was the only commodity with negative cash returns in 1982. Negative cash returns or near breakeven cash returns is not uncommon in the poultry industry. The poultry industry is highly competitive and can increase production rapidly in response to higher prices.

Appendix table 10 — Summary profile of U.S. farms, by major commodities, 1982

Characteristic	Unit	Cash grains	Tobacco	Cotton	Vegetables	Orchards	Field Crops	Dairy	Poultry	LOPD[1]
Assets:										
Land in farms	Acres	498	105	811	168	107	272	302	117	524
Value of land	Dol/acre	872	1,141	992	2,586	3,948	1,127	1,093	1,742	513
Value of land and buildings	Dol/farm	434,582	120,168	804,017	434,790	422,543	306,390	329,861	204,156	268,792
Value of machinery and equipment	do.	64,949	20,736	101,421	47,642	33,281	37,215	71,328	38,887	26,032
Total assets[2]	do.	499,531	140,904	905,438	482,432	455,824	343,605	401,189	243,043	294,824
Crop enterprises:										
Corn-grain	Acres	77	7	0	8	0	7	35	10	16
Corn-silage	do.	0	0	0	0	0	0	25	0	0
Sorghum	do.	15	0	31	0	0	14	0	0	2
Barley	do.	10	0	0	0	0	6	2	2	0
Wheat	do.	94	3	46	8	0	14	7	4	11
Soybeans	do.	88	8	73	6	0	7	6	9	8
Cotton	do.	0	0	331	0	0	0	0	0	0
Tobacco	do.	0	6	0	0	0		0	0	0
Hay	do.	14	7	13	6	0	46	78	10	28
Vegetables	do.	0	0	0	71	0	0	0	0	0
Orchards	do.	0	0	0	0	48	0	0	0	0
Irish potatoes	do.	0	0	0	0	0	10	0	0	0
Sugarbeets	do.	0	0	0	0	0	4	0	0	0
Peanuts	do.	0	0	0	0	0	7	0	0	0
Field seed and grass seed	do.	0	0	0	0	0	3	0	0	0
Sunflower	do.	6	0	0	0	0	0	0	0	0
Income:										
Total sales	Dol/farm	59,509	21,195	149,257	127,890	68,593	45,122	110,222	240,403	43,990
Major commodity	do.	50,206	16,734	108,953	109,830	65,317	26,233	90,126	228,416	29,350
All other crops sold	do.	2,146	2,694	32,399	15,358	2,660	17,249	6,414	5,336	4,661
All other livestock sold	do.	6,150	1,588	2,876	1,161	594	1,749	10,936 9,721	6,046	374
Agricultural services	do.	530	84	1,415	586	514	395	175	191	156
Total operating expenses	do.	26,407	7,853	74,339	56,479	37,422	19,965	76,211	303,163	34,503
Form of organization:										
Individual or family	Percent	85.6	86.9	81.5	85.2	80.9	88.1	81.7	87.0	89.5
Partnership	do.	11.2	12.2	12.5	9.5	12.1	8.3	15.4	7.5	8.2
Corporation	do.	2.7	.5	5.3	5.0	6.1	2.9	2.6	5.2	1.8
Operating ratios:										
Operating expenses	Dol/acre	53.00	74.50	91.70	335.90	350.00	73.40	253.00	2,856.00	65.80
Operating expenses per $ of sales	Dollars	.45	.37	.50	.44	.55	.44	.69	1.26	.78
Operating expenses per $ of assets	do.	.05	.06	.08	.12	.08	.06	.19	1.25	.12
Sales per $ of assets	do.	.12	.15	.16	.27	.15	.13	.27	.99	.15
Sales per $ of operating expenses	do.	2.22	2.70	2.01	2.26	1.83	2.26	1.45	.79	1.27
Sales	Dol/acre	117.00	201.20	184.10	761.00	641.00	166.00	365.00	2,051.00	83.90
Cash returns	do.	64.00	126.70	92.40	425.10	291.00	92.60	112.00	−535.00	18.10
Number of farms	Number	576,353	131,281	21,041	30,666	84,300	100,611	164,454	41,928	905,815

[1]Livestock other than poultry or dairy (LOPD) includes cattle and calves, hogs and pigs, and sheep and lambs.
[2]Total assets excludes inventories of crops and livestock.

Source: Census of Agriculture, 1982.

Appendix table 11 — Nonfamily corporate farm assets and sales, by State, 1982

State	Farms		Land operated		Value of land and buildings		Value of sales	
	Number	*Percent of State total*	*Acres*	*Percent of State total*	*$1,000*	*Percent of State total*	*$1,000*	*Percent of State total*
Alabama	100	0.2	31,311	0.3	32,325	0.4	47,791	2.8
Alaska	10	.2	130,095	9.8	NA	NA	NA	NA
Arizona	125	1.7	1,096,636	6.5	544,872	7.3	304,132	20.4
Arkansas	137	.3	106,038	.7	146,039	1.0	97,567	3.5
California	809	1.0	1,544,771	4.9	3,228,643	5.3	1,288,965	10.3
Colorado	167	.6	639,333	2.0	246,757	1.6	489,963	16.7
Connecticut	28	.7	5,584	1.3	28,512	2.4	29,109	10.2
Delaware	16	.5	6,384	1.0	18,760	1.5	4,274	1.2
Florida	557	1.5	1,300,467	10.3	2,950,340	14.8	726,546	20.7
Georgia	183	.4	122,220	1.0	145,938	1.3	106,965	3.9
Hawaii	80	1.7	492,941	25.4	1,118,647	32.3	313,156	56.1
Idaho	82	.3	121,337	1.0	94,902	.9	62,118	2.8
Illinois	219	.2	137,056	.5	303,082	.6	99,113	1.4
Indiana	194	.3	59,238	.4	140,820	.5	95,774	2.3
Iowa	385	.3	137,860	.4	266,897	.5	170,524	1.7
Kansas	181	.2	246,736	.5	171,178	.6	1,057,848	17.1
Kentucky	130	.1	52,412	.4	58,030	.4	21,480	.9
Louisiana	87	.3	252,337	2.8	251,165	2.1	57,491	4.1
Maine	30	.4	16,124	1.1	44,635	4.3	69,800	17.5
Maryland	64	.4	15,616	.6	34,487	.7	47,646	4.6
Massachusetts	48	.9	8,779	1.5	26,451	2.4	19,971	7.1
Michigan	96	.2	37,647	.3	56,687	.4	46,792	1.8
Minnesota	173	.2	88,885	.3	114,965	.4	106,068	1.8
Mississippi	141	.3	156,045	1.3	157,342	1.4	69,580	3.6
Missouri	182	.2	122,160	.4	106,147	.4	42,699	1.2
Montana	96	.4	870,609	1.6	220,431	1.4	50,933	3.3
Nebraska	281	.5	177,168	.4	255,991	.8	294,527	4.5
Nevada	22	.8	401,318	4.6	107,603	4.9	16,603	8.4
New Hampshire	9	.3	2,125	.5	3,026	.6	5,047	5.0
New Jersey	50	.6	11,415	1.3	41,838	1.5	8,188	1.9
New Mexico	75	.6	1,387,309	3.6	198,551	2.9	108,559	13.2
New York	147	.3	77,623	.8	95,341	1.3	49,656	2.1
North Carolina	172	.2	93,875	.9	116,491	.9	86,705	2.5
North Dakota	20	.1	15,460	Z	17,221	.1	1,662	.1
Ohio	238	.3	78,091	.5	152,950	.7	64,385	1.9
Oklahoma	97	.1	96,833	.3	102,794	.5	123,880	4.9
Oregon	128	.4	265,196	1.6	178,137	1.4	67,687	4.1
Pennsylvania	143	.3	30,630	.4	89,603	.7	78,681	2.8
Rhode Island	6	.8	549	.9	2,711	1.6	147	.5
South Carolina	57	.2	21,720	.4	31,460	.6	28,816	3.0
South Dakota	80	.2	127,543	.3	55,113	.4	63,862	2.6
Tennessee	105	.1	35,641	.3	53,205	.4	17,202	1.0
Texas	526	.3	1,966,455	1.5	861,672	1.2	1,719,803	19.4
Utah	72	.5	107,914	1.3	82,271	1.5	31,071	5.6
Vermont	20	.3	11,111	.7	9,514	.7	1,905	.5
Virginia	136	.3	63,887	.7	84,553	.8	32,884	2.1
Washington	204	.6	327,624	2.3	379,651	2.6	190,982	6.8
West Virginia	25	.1	9,350	.3	6,279	.3	2,624	1.1
Wisconsin	152	.2	90,297	.5	150,821	.8	1,348,251	2.8
Wyoming	55	.6	1,248,849	4.2	185,354	3.0	21,051	3.5
U.S. total	7,140	.3	14,450,606	1.6	13,779,883	1.8	8,578,458	6.5

NA = Not available.
Z = Less than 0.05 percent.
Source: Census of Agriculture, 1982.

Appendix table 12 — Nonfamily corporate farms by value of land and buildings, by State, 1982

State	Total	$1-39,999	$40,000-69,999	$70,000-99,999	$100,000-149,999	$150,000-199,999	$200,000-499,999	$500,000-999,999	$1,000,000-1,999,999	$2,000,000-or more
						Number				
Alabama	84	5	7	4	23	15	17	6	4	3
Alaska	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arizona	105	4	2	0	0	2	14	16	16	51
Arkansas	148	9	5	6	11	7	34	23	35	18
California	743	45	44	9	31	30	80	140	105	259
Colorado	158	10	5	1	2	6	54	19	32	29
Connecticut	26	0	1	8	1	0	2	6	5	3
Delaware	31	0	1	0	2	0	17	8	1	2
Florida	524	19	22	8	54	19	82	109	57	154
Georgia	220	34	8	6	22	33	41	32	21	23
Hawaii	80	7	5	3	3	7	13	6	6	30
Idaho	70	0	7	2	11	2	15	7	8	18
Illinois	267	30	9	26	21	18	53	30	51	29
Indiana	210	34	13	26	18	18	30	35	15	21
Iowa	391	43	22	10	27	23	130	68	44	24
Kansas	188	20	9	6	2	1	75	26	27	22
Kentucky	122	15	30	9	5	7	28	13	9	6
Louisiana	59	0	1	0	0	1	7	13	12	25
Maine	32	1	1	7	2	0	2	16	1	2
Maryland	57	1	20	10	3	2	6	5	7	3
Massachusetts	47	3	1	1	10	1	14	8	4	5
Michigan	74	8	3	2	9	1	29	9	6	7
Minnesota	131	23	6	3	9	15	23	25	12	15
Mississippi	118	7	2	15	1	3	34	14	21	21
Missouri	159	11	12	9	3	21	46	27	17	13
Montana	80	1	1	1	8	9	13	10	10	27
Nebraska	243	29	38	13	10	5	31	45	39	33
Nevada	26	1	1	0	0	0	13	2	1	8
New Hampshire	6	0	0	1	2	0	2	0	1	0
New Jersey	50	0	1	2	6	0	16	5	15	5
New Mexico	81	1	2	13	4	6	12	19	8	16
New York	142	13	15	8	7	20	39	10	12	18
North Carolina	134	28	11	4	19	5	29	10	11	17
North Dakota	29	1	1	0	0	1	14	3	9	0
Ohio	207	23	14	5	24	21	46	30	16	28
Oklahoma	106	13	2	2	2	8	8	47	10	14
Oregon	119	10	4	0	3	11	25	21	18	27
Pennsylvania	113	8	3	17	7	13	24	13	19	9
Rhode Island	8	1	0	0	4	0	1	2	0	0
South Carolina	44	1	7	0	3	8	10	8	3	4
South Dakota	60	7	0	3	8	0	17	10	5	10
Tennessee	115	19	30	0	17	2	33	3	6	5
Texas	443	27	16	15	26	29	78	67	74	111
Utah	92	1	31	9	2	1	14	7	14	13
Vermont	20	0	7	0	2	1	3	3	3	1
Virginia	149	23	5	17	28	7	27	21	11	10
Washington	235	1	28	2	31	36	32	44	29	32
West Virginia	10	0	0	1	0	2	2	2	2	1
Wisconsin	176	26	11	24	13	10	41	26	14	11
Wyoming	52	5	0	1	0	0	3	14	10	19
U.S. total	6,794	568	464	309	496	429	1,381	1,086	856	1,205

NA = Not available.

Source: Census of Agriculture, 1982.

Appendix table 13 — Nonfamily corporate farms by value of sales, by State, 1982

State	Less than $10,000	$10,000-19,999	$20,000-39,999	$40,000-99,999	$100,000-249,999	$250,000-499,999	$500,000 or more	Total
				Number				
Alabama	33	12	7	8	16	9	15	100
Alaska	NA	NA	NA	NA	NA	NA	NA	3
Arizona	22	2	6	15	19	12	49	125
Arkansas	26	2	5	23	29	23	29	137
California	133	45	50	75	111	95	300	809
Colorado	29	10	11	26	26	20	45	167
Connecticut	6	1	2	2	4	5	8	28
Delaware	3	2	0	4	2	2	3	16
Florida	96	38	35	79	67	53	187	557
Georgia	34	9	14	24	29	30	43	183
Hawaii	16	3	3	11	9	7	31	80
Idaho	20	4	10	8	6	11	23	82
Illinois	34	13	22	30	51	32	37	219
Indiana	27	12	21	16	31	42	45	194
Iowa	49	21	38	60	67	78	72	385
Kansas	34	18	16	17	21	22	53	181
Kentucky	38	19	15	27	11	9	11	130
Louisiana	17	6	7	14	11	11	21	87
Maine	11	2	1	2	5	3	6	30
Maryland	20	6	1	5	12	7	13	64
Massachusetts	12	3	9	6	6	7	5	48
Michigan	22	5	14	22	11	11	11	96
Minnesota	25	13	9	28	27	28	43	173
Mississippi	35	15	8	9	22	17	35	141
Missouri	50	23	20	25	24	20	20	182
Montana	11	2	9	29	18	8	19	96
Nebraska	21	12	24	37	47	70	70	281
Nevada	4	1	0	6	4	1	6	22
New Hampshire	4	1	0	2	0	1	1	9
New Jersey	14	1	11	9	5	6	4	50
New Mexico	22	3	8	10	8	4	20	75
New York	39	10	16	23	28	6	25	147
North Carolina	42	11	13	29	27	19	31	172
North Dakota	3	2	3	6	4	2	0	20
Ohio	64	29	38	21	33	27	26	238
Oklahoma	16	13	14	16	16	7	15	97
Oregon	30	7	8	14	22	12	35	128
Pennsylvania	39	6	9	19	26	15	29	143
Rhode Island	4	1	0	0	1	0	0	6
South Carolina	20	4	3	4	11	5	10	57
South Dakota	5	5	10	17	11	9	23	80
Tennessee	51	18	10	7	9	5	5	105
Texas	85	52	50	88	71	43	137	526
Utah	22	5	8	7	16	3	11	72
Vermont	4	2	1	7	4	2	0	20
Virginia	39	19	12	17	18	10	21	136
Washington	32	10	10	43	28	29	52	204
West Virginia	12	0	2	7	1	1	2	25
Wisconsin	24	10	13	24	30	19	32	152
Wyoming	11	5	4	13	5	9	8	55
U.S. total	1,417	513	601	992	1,062	8,671	1,688	7,140

NA = Not available.

Source: Census of Agriculture, 1982.

Appendix table 14 — Nonfamily corporate farms by commodity produced, by State, 1982

State	Total	Cash grain	Cotton	Tobacco	Other field crops	Vegetables & melons	Fruit & nuts	Horticultural and specialty	General crops	Livestock, no poultry or dairy	Dairy	Poultry	Animal specialty	General livestock
Alabama	100	13	0	0	8	1	1	18	2	25	2	27	1	2
Alaska	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arizona	125	6	25	0	8	10	12	9	2	40	6	2	4	1
Arkansas	137	41	3	0	4	0	6	0	1	24	1	50	7	0
California	809	47	16	0	28	67	317	134	25	63	11	52	47	2
Colorado	167	27	0	0	10	2	4	17	5	76	6	7	9	4
Connecticut	28	0	0	5	2	0	0	14	0	0	0	2	5	0
Delaware	16	2	0	0	0	1	1	4	0	2	0	4	2	0
Florida	557	11	0	0	25	33	216	149	1	56	16	14	33	3
Georgia	183	39	0	4	11	4	11	22	8	36	5	39	4	0
Hawaii	80	5	0	0	12	6	15	24	0	9	3	2	4	0
Idaho	82	14	0	0	25	2	1	3	6	19	3	0	7	2
Illinois	219	111	0	0	0	9	1	14	6	51	7	10	9	1
Indiana	194	75	0	0	0	1	1	8	0	53	1	51	3	1
Iowa	385	147	0	0	8	4	0	7	2	181	9	21	4	2
Kansas	181	55	0	0	7	0	2	5	4	99	3	1	3	2
Kentucky	130	17	0	45	3	0	0	6	7	23	7	2	18	2
Louisiana	87	20	7	0	17	1	2	4	2	20	1	7	6	0
Maine	30	0	0	0	8	2	3	3	0	3	0	6	3	2
Maryland	64	8	0	0	2	1	1	20	1	7	4	12	6	2
Massachusetts	48	0	0	1	2	2	14	8	2	1	3	3	11	1
Michigan	96	18	0	0	6	5	13	20	2	11	8	3	7	3
Minnesota	173	38	0	0	10	7	1	17	2	28	12	47	10	1
Mississippi	141	29	23	0	1	2	1	8	1	42	2	18	11	3
Missouri	182	52	0	2	10	1	3	6	4	84	2	12	5	1
Montana	96	22	0	0	5	0	2	4	4	52	0	1	1	5
Nebraska	281	73	0	0	19	0	1	7	1	170	6	3	1	0
Nevada	22	0	0	0	2	0	0	0	1	14	3	0	1	1
New Hampshire	9	0	0	0	1	0	1	1	0	2	1	1	1	1
New Jersey	50	3	0	0	7	3	0	15	0	9	1	1	1	11
New Mexico	75	4	1	0	5	2	3	8	0	42	2	1	4	3
New York	147	6	0	9	6	19	37	4	13	13	22	4	26	1
North Carolina	172	23	4	35	8	2	9	9	41	41	2	35	2	0
North Dakota	20	12	0	0	1	0	0	0	3	3	1	0	3	0
Ohio	238	99	0	2	3	2	8	20	2	45	16	12	28	1
Oklahoma	97	6	4	0	1	0	2	7	2	56	4	4	10	1
Oregon	128	9	0	0	18	2	20	32	4	28	5	9	1	0
Pennsylvania	143	7	0	0	4	5	7	28	8	34	12	21	15	2
Rhode Island	6	0	0	0	0	0	0	2	2	1	0	0	1	0
South Carolina	57	11	0	7	3	0	7	8	1	8	0	10	2	0
South Dakota	80	10	0	0	2	0	0	2	0	52	5	3	3	3
Tennessee	105	15	1	16	3	1	0	14	4	36	5	3	5	2
Texas	526	85	30	0	17	9	21	54	11	237	16	24	19	3
Utah	72	5	0	0	11	0	2	6	3	22	6	4	10	3
Vermont	20	0	0	0	1	2	2	1	2	1	11	0	0	0
Virginia	136	13	0	10	9	3	6	13	2	46	7	11	14	2
Washington	204	16	0	0	14	9	77	29	8	29	3	13	3	3
West Virginia	25	0	0	1	0	0	3	1	1	9	3	1	6	0
Wisconsin	152	21	0	0	7	16	6	14	5	28	26	13	13	3
Wyoming	55	3	0	0	7	0	0	0	1	38	2	0	4	0
U.S. total	7,140	1,218	114	128	366	223	815	836	158	1,971	271	566	405	69

NA – Not available. Source: 1982 Census of Agriculture

Other Reports

U.S. Hog Industry, by Roy N. Van Arsdall and Kenneth E. Nelson. AER-511. June 1984. 116 pp. $4.50. Order SN: 001-000-04408-7 from GPO.

". . . an excellent report . . . presenting a statistical overview of the industry not available in this concise, readable form in any other publication. I believe my colleagues . . . will share my enthusiasm." R. A. Easter, U. of Illinois, Urbana-Champaign

The hog industry has moved rapidly in the last 30 years from barnyard sideline to mechanized million-dollar operation. This report describes the most prevalent practices used today. Includes confinement production facilities, breeding, feeding regimens, waste management, and more. Charts, photos, and 54 detailed appendix tables.

Factors Affecting U.S. Milk Production, by Boyd M. Buxton. AER-527. March 1985. 28 pp. $1.75. Order SN: 001-019-00373-1 from GPO.

Measures effects of changes in major economic factors of milk production on the amount of milk that dairy farmers produce. Major factors affecting milk production include prices farmers receive for milk, input costs of running a dairy farm, profits farmers would receive in alternative farm enterprises, and general economic conditions.

Milk Production: A Four-State Earnings Comparison, by Boyd M. Buxton, Tom McGuckin, Roger Selley, and Gayle Willett. AER-528. February 1985. 48 pp. $2.25. Order SN: 001-019-00376-6 from GPO.

Compares profits from dairy farming in Minnesota, Arizona, New Mexico, and Washington. Estimated rate of return in investment in new dairy operations is higher in the Southwest than in Minnesota or Washington, assuming 1981 prices and construction and operating costs. This difference comes from lower investment required per cow, more milk produced per cow, and higher milk prices in the Southwest.

The U.S. Turkey Industry, by Floyd A. Lasley, William L. Henson, and Harold B. Jones. AER-525. March 1985. 72 pp. $3.00. Order SN: 001-019-00385-5 from GPO.

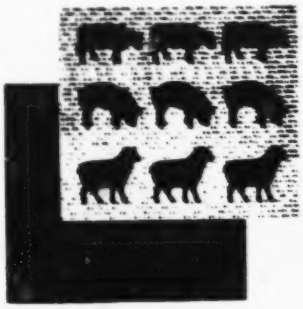
Discusses trends in the thriving turkey industry, an industry which skyrocketed from a modest enterprise with a gross farm value of $270 million in 1950 to a complex agribusiness with a gross farm value of $1.25 billion in 1982. Turkey is now consumed year round, currently about 10.8 pounds per capita annually. The further processed product such as turkey rolls, pot pies, and frozen dinners is the fastest growing sector of the industry.

The U.S. Beef Cow-Calf Industry, by Henry C. Gilliam Jr. AER-515. September 1984. 72 pp. $2.75. Order SN: 001-019-00352-9 from GPO.

This comprehensive look at the U.S. beef cow-calf production industry finds that the number of beef cows fell by about one-fifth between 1975 and 1980 in response to sharp reductions in feeder cattle prices and increases in production costs during the midseventies. Photos and charts illustrate the text.

Characteristics of Farmer Cattle Feeding, by Roy N. Van Arsdall and Kenneth E. Nelson. AER-503. August 1983. 48 pp. $3.75. Order SN: 001-000-04361-7 from GPO.

Now in its second printing, this report examines how the continuing trend toward commercial cattle feeding has reduced the number of farmer cattle feedlots to 113,000 as of 1980, down from 219,000 and 61 percent of the market in 1964. Explains why the number of farmer cattle feeders is expected to decline during the eighties.



Livestock and Meat Statistics, 1983. SB-715. December 1984. 184 pp. $4.50. Order SN: 001-019-00369-3 from GPO.

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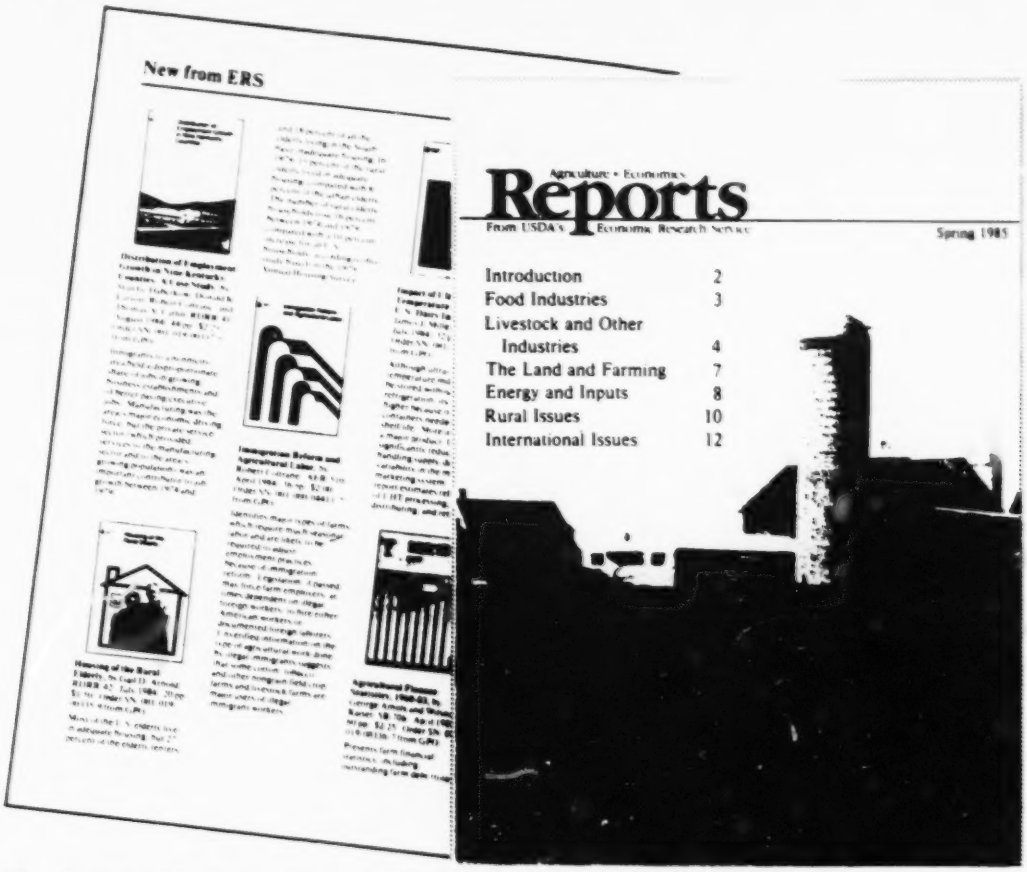

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